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Primary Health Care Teams:
The Collaboration of Pharmacists, Physicians and Nurses

by

©

Sherry Loretta Dieleman

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Science

Centre for Health Promotion Studies

Edmonton, Alberta

Spring 2003

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Degree: Master of Science

Year this Degree Granted: 2003

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Abstract

This study focused on the perceptions of health care providers collaborating in community based teams. Both qualitative and quantitative methods were used to examine the experiences of community pharmacists, family physicians and home care nurses as they collaborated together to maintain or improve community-dwelling high risk patients' health by improving the quality of their medication use. The providers' experience of working in a team was examined for signs that a power sharing partnership had developed. Each of the four components of the power sharing partnership was explored: shared decision-making, respect and trust, shared goals, and communication. In addition, the importance of the understanding of the roles and expertise of other team members was demonstrated. The most successful teams showed all these aspects of a collaborative partnership and were able to strengthen their teams over time. Reduced occurrence of any of these aspects led to a less positive and effective team.

Acknowledgements

I would like to express my appreciation to all the people who helped and supported me through the thesis process…

My thesis co-supervisor, Dr. Karen Farris for her continued support and for sparking my interest in research. Dr. Douglas Wilson, my other co-supervisor, for his guidance and encouragement.

My committee members, Dr. Linda Reutter and Dr. Deanna Williamson for their help and expertise.

Carlyn for her advice and willingness to help. Sandra for her reminders to keep focused on the work. Steven and Maryann for their faith that I would be able to complete this thesis and their many words of encouragement.

Finally, I would like to thank all the people who worked with me on the Health Transition Fund Project of which this thesis was a small part: Dr. David Feeny, Dr. Jeffrey Johnson, Dr. Ross Tsuyuki, Dr. Isabelle Côté, Dr. Leslie Gardner, Ross Bayne and all the health care professionals who participated in the project.

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Chapter 1 - Introduction

Health care providers often work independently in the community (Smith, 1990), even though the advantage of collaborative work has been written about for many years (Sullivan, 1998). More specifically, health care professionals involved in the process surrounding medication use seldom work as a team to solve problems related to medications and the treatment of medical conditions (Canadian Pharmaceutical Association [CPhA] & Canadian Medical Association [CMA], 1996; Ford & Jones, 1995). In an effort to change the practice of working in isolation, community-based pharmacists, physicians and nurses in this study were asked to collaborate so that, together with the patient, decisions involving care and medication needs could be improved and thus improve or maintain the patient's health. This study is part of an Alberta Health and Wellness Health Transition Fund project exploring how health care providers working as teams can improve or maintain the health of high-risk community-dwelling individuals by enhancing the quality of their medication use (Cote et al., 2002; Farris, Feeny, Johnson, & Tsuyuki, 2000).

The purpose of this thesis was to examine the experiences of the pharmacists, physicians and nurses as they worked together in the community to help their patients maintain or improve their health. It was important to include pharmacists on the teams as previous studies of pharmacists' perceptions were few, even though they have been shown to be valuable team members (Carter, Barnette, Chrischilles, Mazzotti, & Asali, 1997; Galt, 1998; Schmidt, Claesson, Westerholm, Nilsson, & Svarstad, 1998). The perceptions of six teams of community based practitioners were collected to get a better understanding of how these teams perceived their collaborative work. A model of a power sharing partnership involving the interrelationship of shared decision-making, respect and trust, shared goals, and communication, was chosen as the theoretical basis for the analysis (Sullivan, 1998). By examining these components a broader understanding of community-based teams was developed. This information will be important to health promotion providers as they are often required to work with many different professionals (Green, Poland, & Rootman, 2000). In addition, as pharmacists increase their health promoting activities they will increasingly become part of community-based teams and benefit from the increased knowledge of team functioning.

The thesis will be presented in a two-paper thesis format. It will focus on the health care providers and their experience in the community-based teams. The first paper will focus on the teams' mission statements and the providers' ability to function as a team with respect to their perceptions of decision-making, respect, communication, and goals. The second paper will examine the perceptions of the providers regarding their collaboration in the project and the care decisions that were made.

The first chapter in this thesis will begin with a statement of the study's purpose and research questions. Definitions of common terms used in this paper will be presented. In chapter 2 the significance of the study will be explored in the literature review. The methods section, chapter 3, will describe the research design, participants, data collection, and analyses. The two papers will then be presented, followed by a final chapter discussing the results, strengths and limitations, and future implications for practice and research.

Problem

Statement of the Problem and Purpose

While much has been written about professional collaboration in health care, few studies have systematically examined the perceptions of health care workers collaborating in the community. Furthermore, the studies that have been completed have rarely included pharmacists on the community team. Information is available on the patient outcomes of such teams but not on the observations and insights of the team members. The purpose of this study was to examine how health care providers perceive their work in a team environment in the community. As such, the study focused on the providers' experiences in relationship to the development of a power sharing partnership. The components of this power sharing partnership consisted of shared decision-making, respect and trust, shared goals, and communication.

Research questions.

1. To what extent do providers experience a power sharing partnership amongst team members?

   As part of this question, the following 4 secondary questions will be examined.

   a) Are providers more satisfied with the way decisions are made when they are in a team environment and, if so, why? (focusing on shared decision-making)

   b) How does working in a team enable health care providers to trust and respect other providers? (focusing on trust and respect)

   c) To what extent does a team's initial mission statement and shared goals reflect the team's ability to function as a group? (focusing on shared goals)

d) To what extent does each provider contribute to team discussions? (focusing on communication)

2. How does the opportunity to form a power sharing partnership affect providers' job satisfaction?

Significance of the Study

As health care priorities shift focus to the community setting, the importance of community practitioners working together increases (Ford & Jones, 1995; Mazankowski, 2001; Romanow, 2002; World Health Organization [WHO], 1978). Care provided by a health care team has been shown to be of benefit to patients through positive clinical outcomes, increased patient satisfaction and quality of life (Carter et al., 1997: Galt, 1998: Hunter, Florio, & Langberg, 1996; Schmidt et al., 1998). While collaboration may be the expected outcome when providers participate in shared decision making, unfortunately, trust and respect between providers may not automatically occur. In order to ensure that patients realize the benefits of care provided by a health care team, it is important that the dynamics of teams consisting of pharmacists, family physicians and nurses be understood. In this manner, the exploration of shared decision-making, respect, shared goals and communication in this study will help teams work together effectively in the future.

Definition of Terms

Community Pharmacist

A community pharmacist is one who practices primarily in a community pharmacy in contrast with a pharmacist who works in a hospital or long term care setting.

Home Care Nurse

In this study home care nurses are part of the Edmonton Home Care program within the Capital Health Region.

Job Satisfaction

Job satisfaction refers to the providers' satisfaction with their clinical work in the team and in their regular clinical work outside of the team.

Mission Statement

Mission statement will refer to the statement of goals developed by each team regarding the care of their patients throughout this study. They are distinct from the goals of the larger project.

Patient

The term patient will be used interchangeably with the term client and health care consumer.

Physician

The physicians in this study have family-based general practices in the Edmonton area.

Primary Health Care

The meaning of primary health care in this paper is based on the broad definition proposed by the Health Transition Fund (Health Canada, 2001). It refers to patient care in the community setting involving family physicians, community pharmacists, home care nurses and other health care professionals. These professionals are the first health care providers that patients contact when seeking health advice or care.

Provider

For this paper the term provider will refer to physicians, nurses (both home care and physician's office nurses) and pharmacists.

Team

A team will be defined as a group of health care professionals working together on the care of patients. The team will share information but members may not normally practice in the same geographical location.

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Chapter 2 - Literature Review

Introduction

Health promotion is inherently a diverse field with practitioners coming from many professions, backgrounds and experiences (Boutilier, Cleverly, & Labonte, 2000). As these practitioners address the broad determinants of health they will meet and work with many different people. The process of working effectively together in a team is not without complications and setbacks. By increasing the knowledge of team members' perceptions of the collaborative process, health promotion strategies involving many disciplines can be more efficient and effective.

This review of the literature will begin with an examination of the theoretical model being used in this study. Each component of the model (shared decision-making, respect, shared goals and communication) will be reviewed in more detail. The literature on community based teams will also be examined focusing on studies of the perceptions of providers working in teams. As part of this section, the inclusion of pharmacists on community teams will be reviewed, as well as studies of job satisfaction. Finally, the role of pharmacists in health promotion and the relevance of this study to health promotion will be examined.

Theoretical Model

The Systems Model of Collaboration was proposed by Sullivan (1998) as a way to conceptualize collaboration. Sullivan recognized that collaboration was an open system, which moved toward a balance and continued to remain in balance by the exchange of its component parts. These ideas were based in part on work by McKay (1969); who examined the properties of systems as they related to theory development. Sullivan

(1998) found that systems theory was well suited to explain the collaborative interaction. The concept of systems theory was described by Senge in his work "The Fifth Dimension" (1990). He explained that "systems thinking is a discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static snapshots" (Senge, 1990, p. 68).

In a systems model, collaboration could best be understood by examining how the parts work as a whole and interrelate. Sullivan (1998) divided the larger system of collaboration into four components: partnership, process, practice and outcomes (Figure 1).

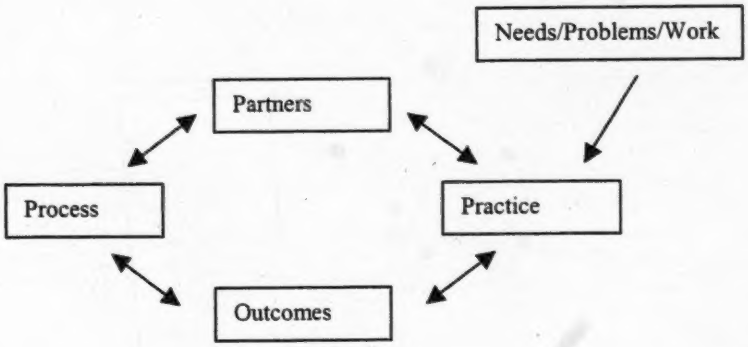

Figure 1. The Collaboration System (Sullivan, 1998)

(Figures 1, 2 & 3 are from Sullivan, T. J. (1998). Collaboration: A health care imperative. New York: McGraw-Hill and are reproduced with the permission of The McGraw-Hill Companies)

The model followed the premise that systems are circular in nature, interacting in more than one direction and feeding back to other components. The collaborative partnership and practice components were further divided into subsystems (Figures 2 and 3). The collaborative practice subsystem (Figure 2) illustrates the interactions between practice, outcomes and partners in the larger system.

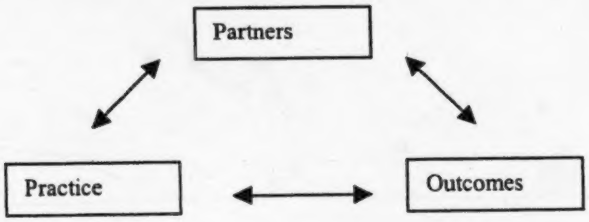

Figure 2. The Collaborative Practice Subsystem (Sullivan, 1998)

While Sullivan (1998) does not clearly show a direct interaction between process and practice, the process of preparing team members and their environment is important for the collaboration to be successful (Galvin et al., 1999; Long, 1996). Figure 3 represents the collaborative partnership subsystem with interactions between shared decision-making, shared goals, respect and communication. A possible shortcoming of the model is the lack of a clear link between decision-making and respect, and goals and communications, as it is illustrated in the figure.

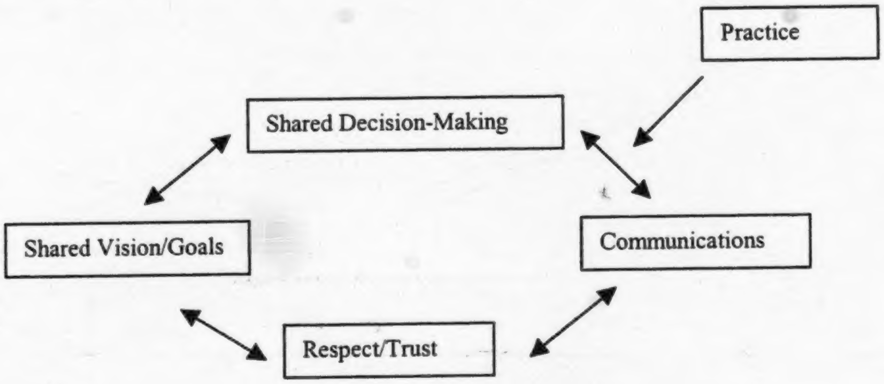

Figure 3. The Collaborative Partnership Subsystem (Sullivan, 1998)

In an explanation of the model Sullivan (1998) indicated that "collaboration is a dynamic, transforming *process* of creating a power-sharing *partnership* for pervasive application in health care practice, education, research, and organizational settings for purposeful attention to needs and problems (*practice*) in order to achieve likely successful *outcomes* (p.118)". The process component of the model corresponded to the requirement for the participants to put time and effort into the initial development of the team. The presence of an identified problem would also help promote team functioning. The outcome component of the model was further subdivided into outcomes for the patients, providers and organization. Sullivan (1998) argued that successful collaboration would lead to increased satisfaction for the patient, fewer errors and better quality of care. According to Sullivan (1998), providers would have an increase in shared expertise, responsibility, communication, decision-making and job satisfaction, and organisations would benefit with increased staff retention and cost-effective patient care.

This thesis will focus on the power sharing partnership, described by Sullivan (1998) as part of the collaborative partnership subsystem. The power sharing partnership involves the interrelationship of the four parts: shared decision-making, respect, shared goals, and communication shown in Figure 3. Sullivan based her operational definition of power sharing in collaboration on work by Weiss and Davis (1985). Weiss and Davis defined a power sharing partnership as "the active and assertive contribution of each party, receptivity to and respect for the other party's contributions and a negotiating process that builds upon the contributions of both parties to form a new way of conceptualizing the problem" (1985, p. 300). Each team member should be knowledgeable, skilled and proficient in their area of expertise in order for others to respect and trust them (Evans, 1994). In a collaborative practice, knowledge and skill would determine how power is shared rather than allocating power by traditional role (Henneman, 1995). Each team member would need to be heard, and together, decisions would be made through a negotiating process. The next four sections examine the components of the power sharing partnership in more detail.

Shared decision-making.

Shared decision making is an important part of successful collaboration (Henneman, 1995; Lockhart-Wood, 2000). For shared decision making to occur each team member must have an understanding of what his or her profession has to offer and be able to communicate that to the other team members (Henneman, 1995). Shared decision making requires the participation of all team members in a process of communication toward a final decision (Beinecke, 1999). A positive relationship between members is also necessary where all professions' needs are considered in making the final decision (Ray, 1988).

A number of researchers have examined decision-making in teams both in hospital and community settings. In a study of an acute care setting, Wake-Dyster (2001) used team facilitators to promote shared decision making among members. Early in the project team members were given the tools needed to negotiate decisions. As the project progressed the teams needed a decreasing amount of direction and the facilitators could focus on providing facilitation. By examining the different teams in the hospital setting, Wake-Dyster (2001) found that the time spent initially to gather information and feedback was important for the success of the team. Waldorff, Bulow, Malterud, & Waldemar (2001) examined the experience of collaboration among primary care physicians and district nurses working with dementia. Information was collected using focus group techniques in separate interviews with the physicians and the nurses. They found that decisions involving diagnosis of dementia were made separately by the physicians and nurses based on their separate experiences. Physicians also tended to be involved later in the process when conditions had worsened. For example, nurses may have decided that a patient needed an evaluation based on the need to move a patient into a higher level of residential care. In contrast physicians were reluctant to reevaluate patients and were more focused on the problems with patients' residences and how patients coped where they currently lived. Both decisions were based on what each professional felt was best for their patient. This lack of shared decision making led to conflicts between the providers. These conflicts could negatively influence patient care as early diagnostic evaluation of dementia may have been delayed. In a community setting, Donnelly (1996) examined the perceptions of decision making among social services and nursing staff on a mental health team. Questionnaires and semi-structured interviews were used to compare the two main groups within the team. Even though there was the perception of team decision making, Donnelly (1996) found that social service staff, more often than nurses, made decisions individually due to their traditional working roles as independent clinicians. Team decision making was also challenged by the need to make decisions in situations that could not wait until the weekly meeting. This made it possible for some providers to avoid bringing decisions to the group. Even so, there was the perception that shared decision making took precedence in the mental health team. However, both social service staff and nurses felt that the decision making process could be improved but they were uncertain how this could be achieved.

While each of these studies only involved a small number of participants they do highlight the importance of shared decision making among the team members.

Traditional ways of working individually need to be overcome and when conflicts occur they need to be brought back to the team for discussion.

Respect and professional roles.

Misunderstanding of a different professional's role can cause conflict between providers. Part of the misunderstanding can come from the expectation of a professional's work to include tasks that they do not usually do. Also, the overlap in expertise may add to the possible confusion as professionals find others doing work similar to their own (Northouse & Northouse, 1998). If professionals obtain a better understanding of others' roles they are able to use the expertise of each other to help the patient. Unfortunately, successful collaboration is not necessarily an automatic occurrence (Lockhart-Wood, 2000). Hutchinson and Gordon (1992) surveyed 104 members of primary care teams in England. They found participants had difficulty understanding one another's professional role and had trouble relating to many other providers. There was marked difference in the professionals' perception of their own role being recognized and their ability to understand other professions as perceived by their team members. For example, while they felt that they understood other professions, their team members still perceived themselves to be misunderstood. Busby and Gilchrist (1992) also found differences in the perceptions of nurses' roles in a hospital setting. Physicians perceived a nurse's role was to provide information during rounds. Nurses believed that information provision to physicians was part of their role but they also perceived their role to include gathering information to pass on to patients. Interestingly, during study observations, nurses did not collect information for their patients during rounds possibly due to a lack of assertiveness.

It is possible with long term teams that the familiarity with others' professional roles and the expansion of roles may lead to a deterioration in collaboration (Cordts, Gardner, Penney, & Konen, 1994). In a study of well established teams, Cordts et al. (1994) found that as roles were blurred team members were less likely to consult with other members as they now performed the tasks that others once did. The awareness that interactions between team members may decrease with time would be necessary to develop ways to address the process and thus sustain a successful team. Patel, Cytryn, Shortliffe, & Safran (2000) also found that professional responsibilities were shared in practice among providers in a hospital. Roles were well defined and depended on the patient and the team goal. This organizational structure allowed for less duplication of tasks and more time for patient monitoring. Unfortunately, Patel et al. (2000) does not describe the length of time the team had worked together so it is not possible to determine if their participants would show a decrease in the quality of interactions as in the study by Cordts et al. (1994).

In a phenomenological study of clinical nurse specialists and physicians, Arlanian-Engoren (1995) identified the experience of trust and respect by team members. While not all participants identified trust and respect as a theme of their experiences, a majority did. They also expressed their experience of the practice role as a complex process. Through these findings Arlanian-Engoren (1995) was able to link a defined practice role and respect as part of the overall experience of collaboration. It was noted that the clinical nurse specialists in this study were at least educated to graduate level, which may have influenced the trust that they experienced from the physicians.

Baggs and Schmitt (1997), using a grounded theory method, were able to identify trust and respect as being part of the components needed before collaboration could begin. They were able to associate being receptive to the possibility of collaborating with trust, respect, interest and communication. Participants reported needing to be shown trust when their recommendations were acted on and respect by having their contributions acknowledged. These components were necessary attributes that each provider needed to bring to the collaborative interaction before it would be successful.

Shared goals and mission statements.

Developing goals has been recognized as an important step in forming an effective team (Drinka & Clark, 2000). Common goals can allow team members to gain an understanding of the skills and values of other health care providers. The discussions surrounding the development of a team mission statement can give providers from different fields an opportunity to share a common language and purpose, particularly among individuals who have not worked together before. Having a common language and purpose have been identified as important aspects of an effective health care team (Canadian Medical Association [CMA] & Canadian Nurses Association [CNA], 1996; Lorenz, Mauksch, & Gawinski, 1999; Sands, Stafford, & McClelland, 1990). This commonality may be reflected in the mission statements developed by the teams.

In addition, the clarity of the mission statement is an important factor in a team's ability to meet their goals (Northouse & Northouse, 1998). Unclear goals can produce frustration among team members and reduce the productivity of team meetings. Klein (1981) in a study of hospital inpatient-staff community meetings found that without specific goals a group would not function effectively. Group members were not sure what was expected from them, what information needed discussion or even the appropriate length of meetings. This created anxiety and confusion, which in turn led to apathy, anger and avoidance of controversy. In an attempt to avoid these problems, Klein (1981) recommended developing realistic goals and a process to enable team members to achieve these goals.

While the literature has advocated the development of common goals in primary health care teams, few studies have examined the resulting mission statements. The studies that have been published have focused on the need for common team goals. In 1997, Jones investigated collaboration among health care workers in a tertiary hospital setting. The providers' perception that there was a need for common patient goals was a theme that emerged from this qualitative study. In a multidisciplinary practice setting, Ray (1988) asked health professionals to identify and describe the behaviours of their fellow workers that would promote collaboration. One of the major factors that emerged was the need for all team members to have a shared goal. Each provider could then play a different role on the team and use their expertise to achieve their team's goal. Poulton and West (1994) identified a primary health care team's shared objectives as an important measure of team viability. A team beginning with shared goals enabled them to have a common point from which they could measure their success.

Communication.

Communication among team members can be difficult when they come from different professional, educational or cultural backgrounds. Confusion can develop when different professions do not interpret terms the same way as other professions in the team. Barr (1997) explained, "confusion resulting from the use of different words and codes of language to describe the same aspect of care can result in an illusion of value uniformity." (p. 1007). Each profession will interpret the language used based on its experiences, professional education and values. Pearson and Spenser (1995) also advocate clear language and the realization that not all providers use the same vocabulary to mean similar things. In their study of primary care teamwork, effective communication was identified as one of the most important indicators of a well functioning team.

Team meetings are an important component of the communication process in the primary care team. Bennett-Emslie and McIntosh (1995) examined primary health care team members' perception of their practice meetings. Seventy team members including general practitioners, nurses and health visitors were interviewed. The formal team meeting was identified as the most important mechanism to promote teamwork. These team meetings also provided the opportunity for a greater awareness of the range of services available to patients. In Sweden, Thylefors, Price, Persson, & von Wendt (2000) also examined formal team meetings using a survey and interviews. Participants from medicine, psychology, social work and education identified lack of time for meetings as the primary obstacle to effective meetings. Poor meeting technique and too large of a group were also identified as obstacles. The perception of professional influence was similar for all groups with 87% feeling that they were heard and 65% willing to challenge other members.

Community Collaboration of Health Professionals

While much has been written about collaboration, few studies have systematically examined the perceptions of health care workers collaborating in the community. Sullivan (1998) described the majority of studies on collaboration to be hospital-based.

To determine if a similar focus was present in perception based articles; a sample search of MEDLINE for English language articles from 1980 to 2002 was performed. The focus term "patient care team" and the general term "perceptions" were entered. The search term "community" was added to search for primary care teams and the abstracts were reviewed. Articles studying perceptions of the providers were identified and education-focused articles were excluded. Perceptions of community based teams were reported in 5 articles and 24 articles examined perceptions of hospital or nursing home team members. This result exemplifies the heavier weighting toward hospital teams throughout the literature and highlights the need for more study in the community setting.

Discussions of collaborative practice and theory have identified the understanding of team members' roles, effective communication, common goals and respect for others as critical elements of collaboration (Lorenz at al., 1999; Sheer, 1996; Sullivan, 1998). Some of the studies that have examined community teams have also identified these elements as being important components of teamwork. Long (1996) examined primary healthcare teams in England, specifically looking at their perceptions of teamwork. Using a qualitative approach, two primary health care teams were interviewed before attending a team building workshop and again one month later. Prompt cards were prepared for the interviews based on preliminary discussions with four professionals. These cards were based on five areas: common goals, role perception, communication, leadership and conflict. After the workshop, Long (1996) identified role recognition and communication as important for team members' positive perception of team function. In addition, the team building workshops had helped to improve the understanding of roles and communication. While this study shows the usefulness of team-building exercises, the topics discussed may have been influenced by the initial use of prompt cards.

Although not specifically looking at primary health care professionals, Coeling and Wilcox (1994) in a preliminary study, also found that nurses and physicians needed open communication in order to collaborate effectively. They asked a convenience sample of nurses and physicians what could be done to improve communication between the professions. Interestingly, nurses identified the relationship aspects of communication as important while physicians identified content as important. Coeling and Wilcox (1994) noted that more investigation is needed in the behaviours that promote effective communication between the professions so that each profession will be able to understand the other better.

Finding ways to share professional skills and work across role boundaries was a theme that emerged in a primary care action research study in England (Galvin et al., 1999). Multiple sources of data were used by Galvin et al. (1999), including reflective diaries, surveys, and focus groups. This study focused on one team for a period of 12 months, which made it difficult for providers to begin to collaborate and find solutions to problems in the time available. Participants were able to focus on skills that could be shared and the refocusing of their roles in order to provide better care to their patients. Also focusing on roles, McGee and Ashford (1996) studied nurses and podiatrists to determine if team members had an understanding of other providers. While respondents had some knowledge of the other profession, less was known about the patient care services that each could offer. Unfortunately, response rates to the survey were poor, especially from the nurses. More importantly, in this study, the definition of a team was also fairly broad and was based only on two professions working in the same geographical region.

None of these studies, however, included pharmacists on their teams. The further inclusion of pharmacists, along with nurses and physicians on the teams, will add a new dimension to the knowledge that has already been gathered. The next section will review some of the ways pharmacists have participated on teams.

Pharmacists as team members.

Having a variety of disciplines on a team is essential to providing the opportunity for different perspectives and observations in order to improve patient care (Wagner, 2000). McClelland and Sands (1993) found that interdisciplinary team assessments were made based on the professional composition of the team. When a certain discipline was absent from the team, care decisions were different, even though team members were not aware that they were providing information for a professional that was absent. Team members were also unaware that their team may be missing the expertise of the absent member.

Gilbert (1997) studied the perceptions of health care providers in South Africa. Gilbert was interested in how pharmacists were perceived in relation to being part of the community health care team. The primary care providers studied included pharmacists, nurses and physicians. Using interviews and surveys Gilbert (1997) found that pharmacists were interested in being part of the primary health care team as well as providing health education and health promotion services. South African physicians and nurses agreed with this view, of health promoting pharmacists as part of the team, to a lesser extent and saw these activities as outside the scope of pharmacy. They viewed pharmacists in their traditional role as part of the team but were reluctant to see them expand their activities. Views such as these could limit pharmacists' abilities to participate equally in a team as other team members may protect their traditional roles. This is problematic, since in a well functioning team roles may be shared among team members (Patel et al., 2000). It should be noted that the South African experience may not be generalizable to health care providers in Canada. Unlike the Canadian experience, some of the pharmacists surveyed had prescribing privileges. This ability to prescribe could influence their perceptions of the activities in which they could participate and also the responses of the other providers.

In contrast to this less optimistic view of the extent of pharmacists' services is the investigation by Smith (1990) who surveyed 551 community pharmacists in Britain to determine the amount of contact they had with other health professionals. Most pharmacists, 82%, had contact with their local physician, primarily related to prescriptions. Smith (1990) also found that 43% of responding pharmacists reported that they had contact with other community health care providers in the previous week and 42% reported talking to non-health workers such as social workers. While this study illustrates that pharmacists could interact with other providers to a greater extent, there was still an opportunity for increased coordination of health education and information provision amongst community providers. In another British study, Ryan-Woolley and Cantrill (2000) explored the relationship between community pharmacists and general practitioners who were treating patients with angina. They found that study participants perceived the experience to be positive. Pharmacists were confident in their abilities and were accepted as part of the community team. Physicians reported a high degree of confidence in their pharmacist and a desire to continue the joint work. While this study involved a small number of participants based on a convenience sample, it does show that it is possible to collaborate successfully in the community.

A number of authors have discussed the pharmacist's role on interdisciplinary teams. Haddad, Keefer, & Stein (1993) examined the teamwork involved in home infusion therapy. They asserted that the pharmacist, nurse and patient would need to work together to successfully implement infusion therapy. Haddad et al. (1993) proposed that there was a need for better communication because the nurse and pharmacist would both share responsibility for a joint care plan, documentation and education. Siple (1994) discussed the benefits of having a pharmacist on interdisciplinary teams especially teams focused on the care of the elderly. Pharmacists had an important role on these types of teams and were able to ensure that medications were used to their greatest benefit. The team pharmacists would provide drug regimens specific for each patient, prevent adverse effects and provide drug information to the rest of the team.

In primary health care studies focusing on patient outcomes, pharmacists have been shown to be valuable members of the teams. Carter et al. (1997) studied team care of hypertensive patients in Illinois and found that patient satisfaction increased, blood pressure was lowered and quality of life improved. Galt (1998) found that pharmacists working in a Veterans Affairs clinic could provide cost savings and positive clinical outcomes. Interdisciplinary nursing home teams including pharmacists in Sweden were able to significantly reduce the prescribing of psychotropic drugs (Schmidt et al., 1998). The need for pharmacists to participate on a team providing in-home care has also been found (Hunter et al., 1996). Pharmacists were able to identify compliance problems during home visit assessments. In a study comparing hospital teams that included pharmacists with teams that did not, Bjornson et al. (1993) was able to show that the inclusion of a pharmacist was of benefit. Pharmacists were able to reduce the patients' length of stay in the hospital and overall drug costs. These studies emphasis the need for pharmacists to be included on interdisciplinary teams as a way to help patients and as a resource for other team members.

Job satisfaction on interdisciplinary teams.

Working in a team environment can provide health care providers with personal and professional benefits. Some of the benefits that have been identified include shared workloads, increased medical knowledge, increased understanding of other providers' responsibilities and job satisfaction (Kaas et al., 2000). This section will focus on findings related to job satisfaction.

Job satisfaction was examined in a Canadian hospital by Kutzscher, Sabiston, Spence Laschinger, & Nish (1997). Nineteen multidisciplinary teams with voluntary membership and employees not working in a team were surveyed to compare their responses. While job satisfaction was found to be increased in the teams it was not significantly different compared to the regular employees. This study was limited by the use of a post-test only design. Thus differences before the intervention, which included team facilitation opportunities, could not be quantified.

Increased job satisfaction was one of the concepts Baggs and Schmitt (1997) identified during a study of the perceptions of intensive care nurses and medical resident physicians. They interviewed 20 participants, chosen to represent a wide variety of experience, gender, age and education. Using a grounded theory method, Baggs and

Schmitt (1997) identified a feeling of job satisfaction as one of the major outcomes of collaborative work. Participants felt their work produced positive outcomes for the patients and also produced a positive work atmosphere of respect. In this study work within the teaching hospital intensive care unit was contrasted with work outside of intensive care so these findings should be applied to the community setting only with caution.

In a study of primary health care workers in a military setting, Byers, Mays, & Mark (1999) found that collaboration among physicians, nurse practitioners and physician assistants was a significant predictor of job satisfaction. They used questions from previously validated instruments to show that job satisfaction was correlated with collaboration scores in their participants (r=0.45). In addition to collaboration, autonomy was also a significant predictor of job satisfaction (r=0.54). Byers et al. (1999) also found that the mean level of job satisfaction was similar across the three different types of providers, leading them to conclude that job satisfaction was not dependent on the type of profession.

Pharmacists and Health Promotion

As the role of pharmacists change and expand in the health care system, they will be able to be involved in health promoting activities. National strategies to encourage health promotion through collaboration have included pharmacists on their planning committees (Health Canada, 1991). Since many health promotion activities involve different groups of people, both professionals and community members, community pharmacists will have the chance to work in a team (Blenkinsopp, Panton, & Anderson, 2000).

Community pharmacists have a role to play in health promotion because of their accessibility to a wide variety of people (Cervetto & Keene, 1996; Hesketh, Lindsay, & Harden, 1995). People visit pharmacists for advice about medical problems which could be expanded to the provision of preventive information (Blenkinsopp et al., 2000). Clinic days focusing on health promotion could be expanded. When pharmacists hold sessions focusing on disease states such as diabetes more preventative advice could be incorporated (Blenkinsopp et al., 2000; Smith, 1990).

Cervetto and Keene (1996) found that community pharmacists in England wanted to expand their role in health promotion and thought their role would be beneficial. The majority of these pharmacists felt that their involvement in health promotion would contribute positively to the well being of their patients. They also saw health promotion as a way to improve the relationship that they had with their patients. In an Indiana study, Kotecki, Elanjian, & Torabi (2000) reported results that were less positive. While pharmacists believed health promotion activities were important, they did not feel prepared to counsel on preventive activities such as tobacco reduction and exercise promotion. Most pharmacists did report being willing to take extra training to increase their knowledge of health promotion activities. O'Loughlin, Masson, Dery, & Fagnan (1999) surveyed 455 community pharmacists in Quebec and found that there was substantial interest in disease prevention strategies. Those pharmacists already involved in some health promotion activities were very interested in increasing their role. A survey of 625 pharmacists in British Columbia found that while pharmacists reported doing health education activities, most were related to their traditional role of medication dispensing (Paluck, Stratton, & Eni, 1994). Recently pharmacists have been able to move beyond their traditional activities and become involved in areas such as smoking cessation, skin cancer prevention, osteoporosis screening and promoting immunizations (Elliott et al., 2002; Grabenstein, 1998; Gutschi, 2002; Mayer, Eckhardt, Stepanski, & Sallis, 1998).

Studies of smoking cessation activities by pharmacists in Virginia (Kennedy, Giles, Chang, Small, & Edwards, 2002) and Great Britain (Maguire, McElnay, & Drummond, 2001) have shown that pharmacists can be a positive influence. Kennedy et al. (2002) was able to show that community pharmacist managed smoking cessation clinics had a higher long-term smoking cessation rate than the national reported rate for all smokers attempting to quit. Maguire et al. (2001) was also able to show a higher rate of smoking cessation with a structured community pharmacist intervention as compared to a control group.

Relevance to Health Promotion

Study of multidisciplinary community based teams will be an important contribution to the field of health promotion. Health promotion as a field of practice is inherently very diverse with practitioners belonging to many different disciplines (Boutilier et al., 2000). This ensures that as health promotion practitioners go out into the community they will be required to work in teams with other disciplines (Macdonald & Bunton, 1992). These community-based teams will also provide opportunities for a greater focus on disease prevention by providers. When a variety of professionals work together each profession is able to focus on their areas of expertise with an increased opportunity for health promotion activities (Goel & McIsaac, 2000). Physicians for example, would be able to identify patients who could benefit from various health promotion activities and refer these patients to other team members with the needed skills (Goel & McIsaac, 2000). A variety of professionals working together would also allow for a quick referral so that health promotion information could be passed on to the patient when it was needed most.

The diversity of disciplines involved in health promotion can range from health care providers to geographers (Bunton & Macdonald, 1992; Green, Poland, & Rootman, 2000), with each field having its own language, area of focus, expectations and interaction styles (Barr, 1997). The diversity can lead to dysfunction among team members and decreased effectiveness (Barr, 1997). In order to ensure that health promotion strategies are implemented as effectively as possible, it is important that health promotion team members, in the community, have as much knowledge on team dynamics as possible. The increased knowledge of the perceptions of community team members will enable the development of the skills needed to collaborate, which, in turn, will support health promotion's focus on increasing peoples' ability to live healthier lives (WHO, 1986).

An example of the increased emphasis on an interdisciplinary focus to health promotion is the project "Enhancing Preventative Practices of Canadian Health Professionals". It was started to develop strategies to begin a refocusing on prevention and health promotion (Health Canada, 1992). The project's steering committee used the Health Canada document "Achieving Health for All: A Framework for Health Promotion" (Health Canada, 1986) as their starting point. Their strategies focused on interdisciplinary and collaborative approaches which would bring health professionals together to focus on prevention. It was thought that this broad-based approach to health promotion would help support preventative programs and messages. In order for this work to be successful, information would be needed on the functioning of cohesively working teams.

Collaborative community health care teams are well positioned to educate their patients on health. They commonly conduct health education, as one aspect of their health promotion activities. While health promotion activities seek to influence the broader context of health, health education aimed toward individuals remains important (Glanz, Lewis, & Rimer, 1997). With an interdisciplinary team, visits to patients' homes could provide opportunities for education and an increased awareness of the challenges faced by patients and their families. Much information can only be gathered when meeting with patients away from the physician's office, pharmacy or home care office (Haddad et al., 1993). The knowledge of the important elements needed to effectively collaborate will be important to community teams regardless of whether their focus is on health education or the broader focus of health promotion.

Summary

Effective collaboration requires team members to be able to share in decision making, to trust and respect each other, to develop shared goals and to communicate effectively. Sullivan's (1998) model of a power sharing partnership brings these components together as a way to promote an effective team. This literature review has examined the components of this model and explored other researchers' related findings.

Previous studies of community based teams have examined communication and role recognition in relation to positive team function. Expectations for communication may vary between professions with misunderstandings of each provider's role adding to the difficulties. Only a few studies have looked at the perceptions of other providers regarding the inclusion of pharmacists on the community team. Studies of perceptions of team members, where pharmacists are included, seem sparse. This is unfortunate, as it is important to have well functioning teams to improve patient care. When pharmacists are included it has been shown to have a positive impact on patient outcomes. In addition, as community pharmacists expand their health promotion activities they will increasingly be working with a wide variety of professionals. Thus it is increasingly important to explore team members' perceptions of shared decision making, respect, shared goals, and communication in order to have effective and satisfying teamwork.

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Chapter 3 - Methods

Research Design

This study used both quantitative and qualitative methods. The quantitative section consisted of a survey administered to team members in a single group pre and post design. The qualitative section involved analysis of audio taped team process meetings. As part of the larger Health Transition Fund project, ethical approval for these analyses were received from the University of Alberta, Health Research Ethics Board, Panel B.

Theoretical Approach

A Systems Model of Collaboration (Sullivan, 1998) was used as the framework for this study of primary health care teams. The focus was on the experience of providers as they attempted to form a power sharing partnership. Shared decision-making, respect, shared goals and communication were examined as the components that can contribute to power sharing partnerships. Use of this model aided in the examination of the different facets of the teams, which led to a further understanding of the collaboration as a whole.

Participants/Sample

Each team included a pharmacist, a family physician, and a home care nurse. In addition to this core group, three teams included the physician's office nurse and one team included two home care nurses sharing their time on the team. In total, 22 health care providers were involved in six teams.

Health care providers were recruited into the project in various ways. Family physicians were identified through recommendations by the four network coordinators of the Capital Health region, referrals by participating pharmacists and with the help of the

Director of Operations for Home Care. Pharmacists were recruited by faxing a brief description of the project to Edmonton area pharmacies. This reached the approximately 700 community pharmacists in the region. The responding pharmacists were asked a variety of screening questions to determine their interest and potential commitment to the project. Home care nurses were recruited through the Director of Operations for Home Care, who suggested possible home care case managers as potential participants. The office nurses for the participating physicians were included in the study if they expressed a desire to be involved. Providers who expressed an interest in participating received a study information sheet containing a description of the project, what was expected from the team members, the possible risks and benefits of participating, confidentiality issues and amount of remuneration. The informed consent process was explained and obtained during the first team meeting (Appendix A).

Activities of the Primary Health Care Team

Community pharmacists, family physicians and home care nurses formed primary health care teams for eight months from September 1999 to April 2000. The providers were brought together to work as teams in order to improve or maintain the health of high-risk community-dwelling individuals by enhancing the quality of their medication use. They were also asked to develop an enabling structure so that communication among members would be strengthened, patient information would be shared, and duplication of documentation would be reduced.

The primary health care teams took various forms in order to conform to the different practice settings. The role that each member of the team took varied with each setting. Some members were the patient's existing health care provider. Other members of the team practiced in a consultant role. They provided clinical consultations on the patient's care but were not the patient's direct health care provider. For example, the pharmacist would give recommendations on a patient's medications but would not be the pharmacist who dispensed their prescriptions. The consultant roles of both the pharmacist and home care nurse were similar. They assessed patients, at the request of other team members, in the patients' homes, family practice offices, or other mutually convenient place.

The pharmacists were asked to perform a medication history and review for each patient. The medication review included lifestyle questions and questions to determine compliance issues as well as other patient medication concerns. It also involved the collection of a list of current medications, medical conditions and possible medication issues. The home care nurse also assessed the patient according to home care protocol if deemed necessary by the team. Then they shared this information with other members of the team in the weekly meetings.

The members of the team were asked to practice a team-based, collaborative approach to primary health care. Initially it was anticipated that each team would care for 50 patients. Due to time constraints the final patient enrollment ranged from 17 to 47 patients for each team. Members met once per week to discuss patient care and team work issues. Generally, it was estimated that pharmacists spent twelve hours per week; physicians three hours per week and home care nurses eight hours per week on patient care issues of which 1 to 1.5 hours of that time was allotted for interdisciplinary conferences. Members of the team were also involved with evaluation of the process and the various tools used to document patient information and care plans. Teams were asked to develop a mission statement and goals to focus their future patient care activities.

Data Collection

Self-administered questionnaires were used to examine providers' satisfaction with collaboration. The questionnaires were developed without an explicit connection to Sullivan's (1998) power sharing partnership model. There were 5 questions examining job satisfaction, 9 questions examining role recognition and experience in the team, and 12 questions addressing satisfaction with the collaborative process, care decisions and quality of care (Appendix B). The questions were taken from previously tested instruments with the exception of questions on the quality of patient care. The 5 job satisfaction questions came from Melville (1980). She used 5 items to measure job satisfaction in general practitioners and found the score to be a reliable measure of satisfaction. When Melville tested the 5 items, a reproducibility coefficient of 0.92 was obtained. Young (1994) also used these job satisfaction questions in her study of primary care teams. In addition nine questions about various aspects of team work, such as role recognition, the usefulness of team meetings and liaising about care were taken from Young (1994). The 9 item instrument Collaboration and Satisfaction About Care Decisions (CSACD) was also included (Baggs, 1994). Seven of the questions can be added to give a Collaboration total score. These questions examined the process of team care and how collaboration occurred. Two questions from Baggs dealing with satisfaction with the decision making process and satisfaction with the decisions, were also included. Baggs' questions were developed to measure physician-nurse collaboration in a hospital setting. The instrument was found to be a valid and reliable measure. The collaboration questions showed a Cronbach's alpha of 0.93 during a pilot study. In the same study the 2 satisfaction questions proved to be closely related (r=0.64). Content validity was supported by reviews of the questions by physician and nurse experts in collaboration. Factor analysis and correlational patterns were used to support construct validity. Three additional questions were added to the surveys to measure the participants' perception of the effect the team had on the quality of patient care. Each question was scored on a Likert-type scale from 1 (disagree strongly) to 7 (agree strongly). Questions were randomly worded negatively and positively to reduce response bias.

Providers completed questionnaires 4 times during the study, approximately every 2 months. Each questionnaire asked the basic 26 questions. In addition, the first questionnaire asked participants about their current work experience and job satisfaction as well as their expectations of being in a team. Each provider was asked basic demographic questions. Additional open-ended questions were also included on the final questionnaire to determine if the experience of collaborating, with other health care providers, met their expectations.

Each team met with an experienced facilitator for 2 or 3 initial meetings to help them form a cohesive team. During these meetings the facilitator helped the teams form mission statements, understand the characteristics of a working team and find ways to handle conflict. Each team was encouraged to develop their own mission statement that reflected their team's goals as separate from the project's goal. The facilitator then met with each team bimonthly to determine how the team was functioning and to deal with any team issues that had developed. During the meetings the facilitator asked the providers various questions in a semi-structured interview format. The guiding questions for these meetings are shown in Appendix C (Bayne, 2000). Audio tapes were made during the team meetings with the facilitator and direct observation of each team was made at least once by the researcher during the project.

Data Analysis

Demographics

Statistics such as means, frequencies and distributions were used to describe the providers in the teams. The demographic information that was collected included age, gender, educational level, additional training, years in practice, previous experience in a health care team and practice volume. Frequencies of each variable was reported and the mean age was calculated. To determine differences across the groups of providers and across teams the nonparametric Kruskal Wallis was performed on the age variable. Chi-squared tests were used on the categorical data: gender, education level, additional training, previous health care team work, and on the ordinal data: years in practice and practice volume (which were reported as categories).

Analysis of the Provider Questionnaire

Before the analysis, the negatively worded questions were recoded so that a higher number was positive. According to the previously published studies, scores were computed for collaboration and job satisfaction (Baggs, 1994; Melville, 1980). A collaboration score was constructed from the addition of seven variables, and a job satisfaction score was constructed from the addition of five variables. The reliabilities of the collaboration and job satisfaction scores were tested at Time 1. Frequencies and descriptive statistics were performed for each variable. Repeated Measures ANOVA was used to detect changes in the scores from Time 1 to Time 4. Due to the small number of participants, the nonparametric Wilcoxon Signed Ranks test was used to determine if Time 1 scores were different than Time 4, as a comparison to the results obtained from the Repeated Measures ANOVA. To make visual comparison with other variables easier the summated collaboration and job satisfaction scores were converted to the seven-point Likert-type scale after analysis.

Providers' expectations of working in a team were used as the Time 1 values. The project researchers anticipated that the perceptions of collaboration and the satisfaction with decision making in the current work environment might be reduced. In order to avoid predetermining that the analyses would show a change in perceptions the decision was made to use expectations of collaboration at Time 1.

Results from the job satisfaction score were used to determine if collaborating with other health care professionals influenced their final job satisfaction. The collaboration score was used in part to determine providers' perceptions of the presence of the collaborative decision making process. In addition, the 2 questions on satisfaction with decisions provided information for the conclusions on shared decision making. The questionnaire also provided information on the providers' ability to access patient information and other professionals' notes as part of their communication processes.

The open-ended questions from the final survey were content analysed by exploring common themes among providers and amongst the different teams, with particular emphasis on respect, goals, and communication.

Analysis of the Taped Meetings

Audio tapes of the teams' bimonthly team process meetings were transcribed. Content analysis was used to identify prominent themes and identify references to elements of a power-sharing partnership. These themes were compared with the results from each of the teams. Analysis examined the extent to which each team handled decision-making processes, trust and respect, shared goals, and communication. The next paragraphs will describe in more detail the analysis that was completed for each of these components of power-sharing partnerships.

Exploration of the components - shared decision-making and trust and respect.

The method of content analysis was based on the process described by Mayan (2001) and Morse and Field (1995). Each transcript was initially read through completely to get a general idea of the content. A sample of the original tapes was compared to the transcripts to ensure an accurate transcription was provided and that speakers were correctly identified. Then the transcripts were photocopied with a specific color paper representing each team. The transcripts were then read slowly with each separate idea being identified and highlighted with margin comments. Transcripts were then cut apart into the separate units. These separate units were then grouped together into common categories. The analysis was then focused on the themes involving the decision making process, and trust and respect. The collected information was then reread to determine if subcategories were present. A tree diagram was made to give clarity to relationships in the categories. Themes and categories were reviewed carefully to determine meanings for each of the teams and the group as a whole.

Exploration of the component - shared goals.

References to shared goals in the transcripts were examined for common themes between the different teams. As part of the examination of goals, criteria were set to define the successes of the teams. A good team was expected to discuss all or most of their patients, have team members attend all or most meetings and have a clear process for the follow-up of patients after the initial discussion. The best teams were expected to share the information in the pharmacists' medication histories and patients' charts with all team members. Teams demonstrating the highest level of reliance had each team member contribute valued patient information and all members' views were equally shared. These teams were positive about presenting all team members' perspectives in group discussions. These criteria were used to determine if the development of goals and the focus of these goals were related to the eventual success of each of the teams. Part of the success of each team was also based on the number of patients seen, meetings attended and patient follow-ups done as reported by the main project (Farris et al., 2000). Each mission statement was examined qualitatively to identify and label the characteristics represented in that team. Mission statements transcribed from the tapes were also compared to the written copy that each group submitted to the researchers.

Exploration of the component - communication.

Communication involved the sharing of information and was based on how each individual's contributions were valued and shared with the team. The contribution of each provider was examined by looking at the number of times and content of each person's statements in the transcripts. The 16 available transcripts from the follow up meetings and final meetings were used. The decision to focus on these follow up transcripts was based on the knowledge that the first taped team meetings focused on the introduction of the study to participants, was the first time the participants had met and the content of the discussions was predetermined by the facilitator. Each of the 16 transcripts was read through and each contribution of the team members was recorded. Thoughts expressed as one idea without interruption from other team members with the exception of affirmatives were counted as one contribution. For example from team 6:

P5 They're busy yah.
P4 and they're busy and and gone is the little
P5 yah
P4 pharmacy that they go deal with and they know you
P5 yah
P4 personally and your whole
P1 right
P4 history to the last twenty three years.

Participant 5 would be counted as 1 contribution, in this example, for their first statement. Participant 4 would also be counted with 1 contribution even though their statement was broken by the "yahs" and "right". Participant 1 would not be listed as making a contribution in this example. Attention was also paid to the flow of ideas to ensure, where possible, that each idea would count as a contribution. Results from the analysis were totaled for each meeting and put in table form for comparison. The value of the contributions to group members was analysed by examining each transcript to determine if comments elicited a response. For example, after one team member discussed how working in the team had changed their way of practice as a whole another member responded "and I'm going with the same idea". They proceeded to comment on the influence to their practice. This showed that the comment was heard and valued. Results from this analysis will also be shown in the table.

Comparison of Teams

The teams were divided into two groups based on the qualitative analysis of the team process meetings. One group consisted of the most successful and well functioning teams (Teams 1, 5 and 6) and the other group contained the remaining teams (Teams 2, 3 and 4). The scores for the two groups were compared at Time 4 focusing on their satisfaction with the decision making process, satisfaction with decisions, perception that working with others was helpful and their Collaboration total score. In addition, Time 4 scores were subtracted from Time 1 scores to give an indication of the change in scores over the study period. These change scores from the two groups were then compared. The nonparametric Mann-Whitney U test was used for the analysis.

Conclusion

Findings on shared decision-making, respect and trust, shared goals, and communication from the transcripts, open ended survey questions and quantitative results were synthesized. The extent to which community based teams perceived their team experience to be a power sharing partnership was explored.

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Chapter 4 - First Paper

The development and functioning of primary health care teams: A qualitative study

Introduction

Collaboration among community professionals has become increasingly common as health care priorities shift to a focus on primary care in Canada (Mazankowski, 2001; Romanow, 2002). It has been shown that effective collaboration can bring positive benefits for both the professionals working in a team environment and their patients (Carter et al., 1997: Hunter et al., 1996; Kaas et al., 2000; Schmidt et al., 1998). With this knowledge of the benefits of collaboration, it is also important to understand how professionals perceive their work in community-based collaborative power sharing partnerships. Learning more about how professionals experience collaboration and power sharing partnerships may lead to better working relationships among community team members.

Collaborative power sharing partnerships may be examined with respect to four components: shared decision-making, respect and trust, shared goals and communication (Sullivan, 1998). Shared decision making is an important part of successful collaboration (Henneman, 1995; Lockhart-Wood, 2000). For shared decision making to occur each team member must have an understanding of what their profession has to offer and be able to communicate that to the other team members (Henneman, 1995). Shared decision making also requires the participation of all team members in a final decision (Beinecke, 1999). Respect and trust are also important components necessary for the collaborative process to be successful. Trust needs to be shown for each team member's recommendations and the team needs to respect each member's contributions (Arslanian-Engoren, 1995; Baggs & Schmitt, 1997). Developing goals has been recognized as an important step in forming an effective team (Drinka & Clark, 2000). Common goals can allow team members to gain an understanding of the skills and values of other health care providers. The discussions surrounding the development of a team mission statement can give providers from different fields an opportunity to share a common language and purpose, particularly among individuals who have not worked together before. Having a common language and purpose have been identified as important aspects of an effective health care team (CMA/CNA, 1996; Lorenz et al., 1999; Sands et al., 1990). Mission statements developed by the teams may reflect this common purpose. Finally, communication has also been identified as an important part, and thus an indicator of, a well functioning team (Pearson & Spenser, 1995). With a variety of professionals on the team it is essential that members are aware that their language may be interpreted differently by others of different professional backgrounds (Barr, 1997).

Purpose

The purpose of this paper is to describe the development and functioning of six community-based primary health care teams in relation to their perception of shared decision-making, respect, shared mission statements and communication. The teams were studied over a period of eight months to determine if the presence of these four components led to a power sharing partnership. In addition, this paper will examine if the effectiveness of team function is reflective of the initial mission statements.

Background

In 1996, the Canadian Medical Association and the Canadian Pharmacists Association issued a joint statement on Drug Therapy. The joint statement encouraged collaboration among physicians and pharmacists to enhance the quality of medication use.

In 1999, a community-based collaboration project was begun in Edmonton, Canada. The purpose of this project was to implement strategies from the Joint Statement by bringing together teams of community-based health care professionals to improve the quality of medication use and provide enhanced care for high-risk community-dwelling individuals. To expand the strategies and to encourage new partnerships, home care nurses were included in the collaborative project. This manuscript will focus on the project findings that related to the perceptions of the health care team members. Findings pertaining to the larger project were reported by Cote et al. (2002) and Farris et al. (2000).

Methods

The exploratory descriptive nature of the study led to the selection of qualitative research methods. The use of qualitative methods allowed for the discovery of team members' experiences and perceptions of their teams. Qualitative methods were a valuable tool in discovering the functioning of community-based teams from the participants' perspective.

In September 1999, six community-based primary health care teams were formed. Each team consisted of a family physician, home care nurse and community pharmacist. In addition to this core group, three teams included the physician's office nurse and one team included two home care nurses sharing their time on the team.

Team members were identified by various methods. Physicians were identified with the assistance of Edmonton-area family physician network coordinators. Home care nurses responded to the request for volunteers by the project's home care liaison. Pharmacists were recruited with a letter sent to all area pharmacists. Personal contacts were also used to recruit some team members. Each potential team member was assessed for qualities such as their openness to change, their willingness to take risks, and their comfort with new ideas. The pharmacists and physicians were interviewed and the home care nurses were assessed and recommended by their area supervisors. Team members (or their employers in the case of home-care-based and physician's-office-based nurses) were compensated for the time they spent attending team meetings and in related activities.

Informed consent was obtained from the twenty-two providers that made up the six community-based teams. As part of the larger project, ethical approval for this study was received from the University of Alberta, Health Research Ethics Board, Panel B.

Each team met for two or three initial team-building meetings to help them form a cohesive team, before caring for patients. A professional facilitator was present to guide the process. During the meetings the facilitator helped the teams form mission statements, understand the characteristics of a working team and decide on processes to make decisions. Each team was encouraged to develop their own mission statement that would reflect their team's goals as distinct from the project's goal. The facilitator continued to meet with each team bimonthly to determine how the team was functioning and deal with any team issues that had developed.

The teams provided care in this project for eight months from September 1999 to April 2000. Each team was expected to meet weekly, at a location of their choice, to discuss patient care issues and concerns. Patients eligible for the study were drawn from the physicians' rosters. Initially it was anticipated that each team would care for 50 patients. Due to time constraints the final patient enrolment ranged from 17 to 47 patients for each team.

Data Collection

Audio tapes were made during the team meetings with the facilitator. These meetings included the initial team-building meetings, two meetings during the project and final meetings with each team at the project's conclusion. Each team was also asked to submit their team's mission statement to the project coordinator. In addition, each provider completed a questionnaire containing open-ended questions pertaining to their team's mission statement at the end of the project.

Information was also collected on each team's functioning. Variables such as the number of patients seen, patient meetings held, and problems identified and resolved were collected manually and with the use of a computer program.

Data Analysis

Audio-tapes of the team process meetings were transcribed and checked for accuracy. Transcripts of the initial team meetings were reviewed and summarized. After review of all the transcripts, detailed analysis was focused on the sixteen transcripts available from the meetings during the project and the final meetings. Content analysis was used to identify prominent themes and identify references to elements of a power sharing partnership (shared decision-making, trust and respect, shared goals, and communication). These themes were compared with the results from each of the teams and examined for changes over time. The method of content analysis was based on the process described by Mayan (2001) and Morse and Field (1995).

Additional analyses were conducted to provide further information on shared goals (mission statements) and communication. Each mission statement was examined qualitatively to identify and label the characteristics represented in that team. Mission statements transcribed from the tapes were also compared to the written copy that each group submitted to the researchers.

The analysis of communication was based on how each individual's contributions were valued and shared with the team. The contribution of each provider was examined by looking at the number of times and content of each person's statements in the transcripts. Each of the 16 transcripts was read through and each contribution of the team members was recorded. Thoughts expressed as one idea without interruption from other team members with the exception of affirmatives and short interruptions were counted as one contribution. Attention was also paid to the flow of ideas to ensure, where possible, that each idea would count as a contribution. Results from the analysis were totaled for each meeting and put in table format for comparison. The value of the contributions to group members was analysed by examining each transcript to determine if comments elicited a response. For example, after one team member discussed how working in the team had changed his/her way of practice, another member responded "and I'm going with the same idea". He/she proceeded to comment on the influence to their practice; showing that the comment was heard and valued.

Criteria were set to define the successes of the teams. A good team was expected to discuss all or most of their patients, have team members attend all or most meetings and have a clear process for the follow-up of patients after the initial discussion. The best teams were expected to share the information in the pharmacists' medication histories and patients' charts with all team members. Teams demonstrating the highest level of collaborative partnership would have each team member contribute valued patient information and all members' views would be equally shared. These teams would be positive about presenting all team members' perspectives in group discussions. Team members would be guided by a common purpose. In summary, all four components of a collaborative power sharing partnership, shared decision-making, respect and trust, shared goals and communication, would be evident in the best teams.

Results

The 22 providers that joined the project were predominately female, with the exception of six male physicians (out of six physicians) and one male pharmacist (out of six pharmacists). Providers ranged in age from 23 to 52, with a mean of 38.8 years (SD=8.7). Their practice experience ranged widely from newly graduated to 20 or more years of experience. Eighteen providers reported that they had previous team experience during their professional careers.

Shared Goals - Mission Statement Results

The six primary health care teams developed mission statements with different foci. These statements are shown in Table 1. In order to classify the teams for analysis, each was given a title that summarized their mission statement. Team 1 stated that they would endeavor to learn and develop teamwork skills, so they were labeled "Learning". In addition this team had a focus on patient and professional outcomes. Team 2, the "Process" team, focused on the processes needed to share information for appropriate patient care. According to the transcripts, this team viewed their mission statement as a living thing. The "Visionary" third team hoped that their team would be a model for primary health care reform by redefining the roles of patients and professionals and increasing cost-effectiveness in the delivery of care. Team 4 was labeled "Unclear" due to their lack of focus. During the initial team building meetings no clear mission statement was formulated; the only goal identified was improving medication management. By the end of the fourth month of the project the researchers requested a formal statement from this team. The team stated that they wanted to apply the team approach to the community setting through an enjoyable process. Team 5 was labeled "Boundary Controversy" due to their goal of fluid roles and responsibilities, which caused some initial controversy among some of the team members. A focus on improved health for their patients was also included. The last team "Enhance" focused on improving the team approach in the community while improving the quality of life of both the professionals and patients. Further analyses of the teams' mission statements and goals are discussed under the results of the content analysis of the meeting transcripts.

Content Analysis Results

The transcripts were examined for references to shared decision making, trust and respect, shared goals and communication for each meeting. The categories that emerged were checked for the strength of each category among the different teams. These categories were then used as the basis for further analysis focusing on each theme, such as shared decision making, and how the theme changed over time (Tables 2, 3, 4 and 5).

Shared decision-making themes over time.

The themes of shared decision making are shown in Table 2. At the first follow up meetings, Teams 1, 3, 5 and 6 discussed how they made decisions and how they had preplanned methods for decision making. These themes of discussion, involvement of all the members and finding solutions were continually expressed by Teams 1, 5 and 6 through out the project. Team 3 did not discuss their process of decision making in the second and final meetings. Only Team 4 reported that they had not had any good discussions at the first follow up point of the project.

> *We haven't even had a really good discussion yet about the patients that I have seen. (Unclear – Team 4)*

This lack of discussion did not improve much over time and by the end of the project there was dissatisfaction expressed with the complexity of problems. This contrasts with other teams who used their time for difficult problems.

> *There was some good intervention and discussion on some of the clients but I would have anticipated a little bit more complex challenging...(Unclear – Team4)*

> *I've enjoyed it too...dealing with the difficult client and having them [team members] here and being actually able to access them and...discuss with them more than on the phone or the usual method when we're dealing with difficult clients in the community. (Enhance – Team 6)*

Trust and respect themes over time.

The themes of trust and respect are shown in Table 3. Comfort was a strong theme that emerged during this part of the analysis. All teams mentioned the importance of feeling safe and comfortable with their team members. They needed to be able to feel safe in expressing their opinions or asking questions without feeling judged.

> *You know you open up to each other enough that you really start to feel comfortable cause you need that comfort. (Process – Team 2)*
>
> *We become comfortable with each other and I think we needed to establish that level of comfort with each other so that we could feel comfortable contributing and so forth. (Boundary – Team 5)*

Team members were willing to learn from each other and trust the observations of other team members. The openness to learning from others required a level of trust in their abilities and respect for their expertise. Team 5 was the most consistent in discussing their willingness to learn from others throughout the project. The physician on Team 5 explained that team building could help professionals develop much more trust in their team members than they may develop through normal community interactions.

> *You got to get to know those people so you know who you can count on and who you can't, what their skills are and then what happens is everybody's skills can go up a notch. I can be more effective. You can be more effective...I mean I think we all learned from each other. (Boundary – Team 5)*

Three of the teams came to rely on their fellow team members (Teams 1, 5, and 6). These teams discussed trusting each other and having each provider coming to the team with skills that would add to the team's effectiveness.

> *When one of us is saying "I'm just totally fed up...and I can't deal with this anymore" somebody else says that "okay I'll take the ball". (Learning – Team 1)*

Treating other team members with respect was important for most of the teams. Some teams expressed their respect for other providers by defending the need for the variety of professions to be present on the team. For example when the home care nurses were unsure of their role on the team other providers would quickly express the team's need for nursing expertise.

In contrast to the other teams, Team 4 struggled when trying to function as a team. Their lack of clarity in the processes needed to handle the patient volumes seemed to be reflected in the minimal signs of reliance and respect that they had for each other. During the first follow up meeting they reported to the facilitator that they got along well together but by the final meeting this was no longer the tone of the meeting.

> *We were certainly, you know, capable of working independently but I think you know everybody's busy and that the time involved in meeting we...stopped meeting. We didn't meet very often and when we met it wasn't as productive. (Unclear, last meeting –Team 4)*

The team members at the final meeting reported a lack of respect for each other's time evidenced in meetings not always attended nor messages sent to all members to cancel those meetings. They reported listening to each other to a greater extent after an intervention meeting by the project researchers. One member also reported feeling of little benefit to the team by the end of the project. This contrasted with other teams and the way they related to each other. Teams 1 and 5 often mentioned how each member was important and a totally valid member of the team. This was especially evident if the facilitator questioned the role of one member or when team members were discussing their own role.

Shared goals themes over time.

Having goals developed at the beginning of the project was important to four of the teams, with three teams finding that having written goals was important to their team by the end of the project (Teams 1, 5 and 6). The fourth team, Team 2, felt that a concrete goal was important at the first meeting but their final comments were not recorded. It was important to Teams 5 and 6 that their goals were self-generated and separate from the overall project goals. After having developed their own vision of what they wanted to accomplish they could all move toward that goal. Team 2 showed flexibility in their goals. They found that their goals could change over time with their experiences.

For some of the teams the mission statement was in the back of their mind when they worked as a team.

> *[The mission statement] is in the way we interact, answer our calls and the way...we're honest about certain things and...it's a process that's working. (Process – Team 2)*

Some teams found that developing the statement helped them learn about their team members and thus have a more effective team.

> *In discussing the wording then...you'd sort of fine tune how you interpreted things and communicate a little better I think...we made ourselves communicate in order to come to a final statement of what we wanted and how did we want to word it and to express what we were feeling. (Learning - Team 1)*

For others having a goal statement was not as useful. Team 3 felt their goal was to help patients and that they did not need a formalized goal.

> *The goal was just there like I don't think we had that goal in our minds as we were doing patient care. (Visionary – Team 3)*

Team 4, who initially struggled with the development of a mission statement, also did not find their goal useful and did not refer back to it during the project.

> *Our mission statement is just basically what what we did and I think that's pretty straight forward...we have that at the back of our mind that that's just what we're doing. (Unclear – Team 4)*

Interestingly, this is the team whose member reported not accomplishing what they had hoped for at the beginning of the project. Team 5 also did not refer back to their goal but in contrast they felt their goal was useful. They felt that they would have gone back to review their goal during a longer project or as they learned and evolved over time.

Communication themes over time.

Communication took many forms within the different teams. Some teams found that face to face communication was extremely important to them and was especially useful until they developed relationships with each team member. After having developed a relationship with each other Teams 1 and 5 were able to sustain an increased level of open communication among members throughout the project. Team 6 also found that communication with other members was easier than contacting other providers in regular practice settings.

> *I've enjoyed it too from the point of view of dealing with the difficult client and having them [other team members] here and being actually able to access them and discuss with them more than on the phone or the usual method when we're dealing with difficult clients in the community. (Enhance - Team 6)*

Some teams incorporated the use of phones and fax machines in their transmission of information from the start of the project (Teams 3 & 4). These teams found it useful to fax summary information to other members between meetings. The office nurse in Team 3 sent information to the home care nurse and pharmacist before they did the initial patient interview. In contrast, for Team 4, it was the home care nurse who faxed patient assessment information to the pharmacist.

The office nurse was an integral part of the communication process in Teams 5 and 6, especially as the project progressed. The office nurse was able to act as the communication link for these teams.

> *I'm in constant communications like a lot of the times during the week I'll call [the team nurse] and I'll say "just let you know this is what I've done" and then she relays that to [the team doctor]. (Boundary – Team 5)*

For some teams developing an effective method of communication was not as easy. It took more time for Team 2 to develop a sense of trust before they achieved a similar level of open communication as other teams.

> *I feel we did communicate openly, especially as time went on and we became more comfortable with one another. We were then able to discuss each patient and tailor a plan for them...with each discipline contributing their opinions where required. (Process – Team 2, taken from final questionnaire)*

Team 3 had difficulties with keeping the information current for all the members. One member commented during the second follow up meeting:

> *There was somebody that we stopped one of the medications so we need to really touch base and find out what's been happening because I don't know what, Doctor, because some of the people have come back to see you subsequent to my visit and then I don't know how you, what you've done with them. (Visionary – Team 3)*

This team continued to be dissatisfied with the availability of instant communication and remarked on it at the final meeting. While they felt face to face meetings were okay they would prefer to work in the same location for easier and faster communication.

Team 4 was not communicating well by the end of the project. They were not meeting and not calling each other to cancel meetings. One member found it difficult and awkward to talk about the group's problems in the team or to the facilitator. This left the team's problems disregarded and the lack of effective communication seemed to increase.

Understanding roles and expertise.

In addition to the four components examined by Sullivan (1998) as part of a power sharing partnership the theme of understanding roles was noted during the content analysis. All teams discussed the importance of understanding their team members, some teams more explicitly than others. Teams 1, 5, and 6 expressed the need for the knowledge of team members' skills the most clearly and consistently.

The teams explained that they needed to learn what each member was able to do before they could use those skills to support the teams' goals. Understanding other team member's expertise allowed providers to work in ways they had not expected. For Team 6 this understanding enabled the pharmacist to be involved in researching therapies which was a role the other team members had not expected him/her to take.

> *I didn't anticipate at the beginning…[what] you've been doing is some …sort of research work where you bring …a summary of different classes with drugs for different things and different uses and stuff like that. (Enhance – Team 6)*

Team members explained that as they learned more about other providers they were better able to understand how their team members viewed problems. They also became more aware of how they could be of help to other team members and how to best use their expertise.

> *We've also learned about other expectations that we have. But I wouldn't know half of what [the home care nurse] did but I also wouldn't know sort of...how she looks at a problem and...figures out where we are going to get to, like...what can I achieve here. (Learning – Team 1)*

Contributions and Value to Team Members

The contributions of each team member and the value placed on the contributions are shown in Table 6. The facilitator was present for 15 of the transcribed meetings and his contributions as well as the project staff contributions were included for completeness. Two teams, Teams 2 and 4, had only 2 meetings recorded due to equipment failure and the inability to meet, respectively.

The contributions of members were valued in most groups, with team members responding to statements or continuing to discuss an idea put forth by another member. One exception was in Team 2 during their second meeting. One member dominated the conversation over the next highest contributing speaker (34 compared to 12 contributions). In addition, for this meeting one of the member's contributions did not appear to be as valued as other interactions. Team 4 was also an exception. This team showed limited value in the contributions of others at the first meeting as well as a dominance of one speaker over the next highest contributor (57 compared to 28 contributions). The most active speaker, to a large extent, interacted with and received responses often from the facilitator rather than the other team members. Their comments were quite brief, as well, compared to the other teams. In the last team meeting for Team 4, contributions were much more even between the team members. Of interest is the fact that one team member was absent from this final meeting. Another exception was Team 6. This team had one member contributing much more than the next highest contributor at the first meeting (53 contributions compared to 31). This inequality appeared to even out over the next two meetings.

Processes of the Teams

The processes of each team were measured in relation to their patient care activities. Table 7 shows the number of patient histories, meetings, issues, actions and resolved issues for each team. The patient histories were compared with the number of patients recruited by the group. Some groups were able to interview all of their patients while others were not. The number of medication and non-medication issues or problems identified per patient varied widely among the teams as did the number of actions taken to resolve the problems. The percentage of issues resolved, controlled or improved was also quite different for each team.

An example of the type of clinical issue that the teams identified was a patient-report of uncontrolled pain. Through exploring the issue the team was able to determine that the patient was only taking their pain medication when they thought they needed it instead of on a regular basis. The team took action by providing a dosette to improve compliance, using a pain scale to determine the level of pain and having the patient assessed by a physiotherapist. The outcome was improved pain control. At the initial interview, the patient reported the pain as a level of 5 on a scale of 7 indicating severe pain. After the team's intervention, the pain was reported to be a 2 or 3.

The transcripts of the team meetings provided additional information on the processes of the teams. The degree to which each team displayed their ability to coordinate their team activities is shown in Table 8. Good team processes were indicated by the teams' ability to organize their meetings and handle the influx of new patients while continuing to follow-up on current patients. Team 1 was one of the teams that did this particularly well and was able to discuss patients before the pharmacist went to do the first home visit.

> *We sort of throw things around. Often before she's [the pharmacist] seen them I will have sort of given my feel in terms of what medical problems we're dealing with and why my concerns are. (Learning – Team 1))*

Each team had difficulties with certain aspects of the project. The various areas of concern are shown in Table 8. Four of the teams had difficulty with the number of patients that the project expected them to care for (Teams 2, 3, 4 and 6). Team 1 found the use of new computer software a challenge. Both Teams 5 and 6 would have preferred a different setting for the research project's teams.

Discussion

The most positive and successful teams were Teams 1 (Learning) and 5 (Boundary). These teams demonstrated shared decision making, reliance upon the other team members, trust and respect for each other, shared communication and the ability to handle the stresses of organizing their patient activities. The demonstration of these themes was evident in the content analyses of the team meetings. Teams 1 and 5 showed evidence of shared decision making by expressing the need for the involvement of all members in patient care discussions. There was a high level of trust in other team members' skills. Having common goals was important to these teams and they perceived their communication to be open throughout the project. The high value placed on open communication was supported by the analysis of their contributions and communication during the follow up meetings. These teams consistently showed contributions by all members and value for those contributions. They were also successful in their patient care outcomes by identifying and resolving more patient care issues per patient than the other groups. By being able to share in decision making, show evidence of trust and respect for each other, share goals and communication, they were able to develop a collaborative power sharing partnership.

Team 6 (Enhance) also became one of the best teams. They differed from Teams 1 and 5 in their contributions at the first meeting. In Team 6, one team member dominated communication in the first follow up meeting. Even though the inequality was seen initially it was rectified in the following meetings. This team had a process for shared decision-making and showed reliance on other team members. Shared goals were important to this team. There was a recognition that face to face communication and the link of the office nurse kept the team connected. Team 6 was able to complete the highest number of patient histories and resolved many patient care issues. Their ability to come together as a team over the length of the project was the basis for their classification as one of the best teams.

Team 2 (Process) was a good team even though they did not function quite as well as the most successful teams. They were able to help their patients and take numerous actions to aid patients. This team had limited discussion of their decision-making processes, which may have been due to their focus on shared goals. They viewed respect and trust among team members as crucial to working together. Shared goals needed to be flexible, with time needed before communication became more open. The analysis of the second meeting showed domination by one member and less value to the others' contributions. Unfortunately, since the final meeting transcript was unavailable it was impossible to see if this team had an improved communication process at the project's conclusion.

The Visionary team (Team 3) was able to help their most needy patients. Members of this team were disappointed in the project but felt that their team was a good one. They felt that not enough time was provided by the project to enable members to give the best care to the patients at the highest risk of medical problems. This feeling of disappointment permeated their reflections and may have affected their team function. Even so, they showed respect and trust for their team members with the building of relationships and friendships. A shared formalized goal was less useful to this team. They may have had difficulty keeping information current for all team members and remarked on their dissatisfaction with the timeliness of communication in weekly meetings.

Team 4 (Unclear) struggled throughout the project and never managed to connect as a team. They had difficulty developing a process of shared decision making and were dissatisfied with the discussions they did have. Unlike the other teams, their initial perception that they interacted well together did not develop and grow. By the end of the project they showed minimal signs of respect and reliance on each other. Having formalized shared goals was not perceived to be important to this team. Communication was also a problem. They were not communicating well even as early as the first meeting. At that meeting there was a domination by one speaker and limited evidence of value placed on contributions by other members. Their inability to function effectively as a team was also evidenced in their patient care process statistics. These remained substantially below the other teams' numbers.

Examination of the team mission statements did not conclusively convey the teams' ultimate attitudes and processes. While some teams wanted to change the health care system, others focussed on improving the quality of patient care. Their differing goals did not seem to predict their success. Success did seem to be predicted by the team's ability to come to consensus on a common mission statement in the first few weeks of the project. The team that was unclear in their mission at the beginning struggled throughout the project. The comment on how the team had stopped meeting, by the Unclear (Team 4) member during the last meeting, illustrated how they were reduced to working independently of each other.

The ability of the teams to work toward their mission statement may have been constrained by project expectations and time lines. Engel (1994) proposed that team goals can be influenced by a number of outside factors beyond the control of team members. He explained that financial constraints and administrative priorities could influence the development and attainment of team goals. During this project the teams were encouraged to care for approximately 40 patients in a short time frame. Some teams found this more difficult than others, and this may have decreased the time they had available to review their mission statement during the project. Some teams were concerned with the setting for the teams. They suggested that a team could function better if team members were in the same physical location even though the project provided time for face-to-face communication.

Power sharing collaborative partnerships have been identified as involving the four components, shared decision-making, respect and trust, shared goals, and communication (Sullivan, 1998). In this study, the best teams (1, 5 and 6) showed evidence of all four components. The presence of these components allowed them to work well together as evidenced by their comments and patient care activities. While these teams differed in composition and types of patients they were still successful. This demonstrated that there was no one way to form a successful team as long as the elements of a power sharing partnership were present. The good teams (2 and 3) did not function quite as well as Teams 1, 5 and 6. Each of these teams showed decreased evidence for one or more components. The dominance of some participants' contributions and the reduced value placed on contributions in Team 2 was problematic. For a true power sharing partnership to occur Weiss and Davis (1985) proposed that each team member would need to be an active contributor. The rest of the team must also value those contributions. Team 3 had evidence of reduced communication among members and reduced discussion of decision-making processes. The presence of both of these components has been identified as important in collaboration (Henneman, 1995; Pearson & Spenser, 1995). In Team 4 there were difficulties with all the elements of collaboration and the team continued to struggle. Most evident was the decreased evidence for respect and trust among members by the end of the project. The lack of respect was a concern as Baggs and Schmidt (1997) found that trust and respect were needed before collaboration could occur.

Procedures were implemented to ensure the trustworthiness of the study findings. The four components of trustworthiness or rigor were truth value, applicability, consistency and neutrality (Morse & Field, 1995; Sandelowski, 1986). Truth value was attained by the use of a comprehensive analysis in order to faithfully reflect the experiences of the providers. Quotes were also used to illustrate the perspectives of the providers (Morse & Field, 1995). The setting for the primary health care teams and the providers were described to allow readers to determine if the findings would be applicable to their context (Creswell, 1998). To produce consistency an audit trail of the decisions made during the project was maintained (Morse & Field, 1995). The researcher strove for neutrality by recognizing personal biases and discussing the research process with peers (Creswell, 1998).

There are a number of limitations to this study. Primarily, the providers were highly motivated and expressed their desire to participate when they were recruited. Their initial motivation may have influenced their efforts to make the project a success and thus their perceptions may differ from teams brought together due to work requirements or other situations beyond their control. Secondly, as a reflection of team function during patient care activities, team meetings with the facilitator were used as a source for data on team function. It is possible that the presence of the facilitator and recording device may have caused teams to act differently than they normally would.

Shared decision-making, respect and trust, shared goals and communication have rarely been studied together in a primary care setting. Research has primarily focused on one or two of the components of a power sharing partnership. In the United Kingdom, Long (1996) examined primary healthcare teams and identified role recognition and communication as important for team members' positive perception of team function. In another English study, Pearson and Spenser (1995) found that the top four indicators of effective collaboration were shared goals, effective communication, good patient care and defined roles. Cook, Gerrish, & Clarke (2001), Donnelly (1996), and Waldorff et al. (2001) have studied shared decision making in community teams. The study described in this paper differed from the previous studies by examining ~~all~~ the components of a power sharing partnership in teams of family physicians, nurses and pharmacists. The results have shown that all these aspects are important in a community-based primary health care team. Further, the inclusion of pharmacists on teams with nurses and family physicians was important. These professionals often need to work together in the community but more literature on their experience of collaboration is needed. An increased knowledge of the elements necessary for an effective partnership will allow them to collaborate successfully.

Examining both the written goals of each team, the meeting transcripts, and patient activities was important in gaining a clear understanding of each team. Research in the future could focus on community-based primary care teams in different settings with some teams located in the same office and others working in separate locations. When incorporating goals into a project there should be clear expectations for the review of team goals. Teams should be expected to review their mission statements every two months. The scheduled review would allow for increased reflection on the goals and perhaps provide opportunities for teams that had wandered from their initial purpose to reevaluate their team's function. Close review of the progress of each team throughout the project may also allow teams that struggle to refocus their energies.

Conclusion

This paper described the functioning of six community-based primary health care teams. The most successful teams showed reliance and respect for each other, which strengthened over time. The ability to involve all team members in decision making, share goals and listen to other's contributions was indicative of an effective team. Teams with clear evidence of all four components of a power sharing collaborative partnership, shared decision-making, respect and trust, shared goals, and communication, were the most successful. Reduced evidence for any one of the four components led to a less positive and effective team.

The process of writing mission statements was an important step in team development for each of the teams. Most of the professionals found it a valuable experience, but more project time may have been needed for reflection and revision of the goals throughout the study. While the mission statements gave some indication of the teams' attitudes, evidence of shared decision making, trust and respect for other team members and the ease of communication need to be considered to obtain a clear indication of each team's growth toward a power sharing collaborative partnership.

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Table 1. Team Mission Statements

Team	Team Title	Mission Statement
Team 1	Learning	"To develop the skills and understanding required to effectively work as a team to achieve patient-focused and professional outcomes."
Team 2	Process	"Through open communication, we intend to develop a process through which each patient's overall healthcare will be most appropriate and effective."
Team 3	Visionary	"Redefine the traditional roles of a multidisciplinary team to improve the quality of care, while empowering patients. The goal of a team based assessment will help prevent increased morbidity and add potential cost savings to the system. This may serve as a model for primary care reform."
Team 4	Unclear	At the end of fourth meeting (October) – "Improved medication management." At the end of January – "To apply the multidisciplinary approach to improve the health of high risk clients living in the community through a process that is enjoyable and rewarding for all."
Team 5	Boundary Controversy	"Improved health through multi-disciplinary primary care teams characterized by fluid interdisciplinary boundaries and non-compartmentalized duties and responsibilities."
Team 6	Enhance	"To enhance a community team approach involving our team (which includes the patient/client) to improve the quality of life of all involved."

Table 2. Shared Decision Making Themes – Changes Over Time

	First Follow Up Meetings	**Second Follow Up Meetings**	**Final Meetings**
Date of meetings	December 13 to January 18, 1999	February 8 to March 2, 2000	April 25 to June 7, 2000
Number of teams	6 teams	5 teams*	5 teams*
Themes			
Discuss issues and make decisions	Discuss patients All discuss Come together (Teams 3, 5 & 6)	Discuss patients around table Discuss issues/patients Group makes adjustments (Teams 1 & 6)	Discuss, involve and feedback Bring to team, get things solved (Teams 1 & 5)
Work together – planning methods that work	Plan to discuss patients Work together Planning methods (Teams 1, 3, 5 & 6)	Template of activities, a process of action, generate problems & issues (Team 5)	Learn how to deal with each other (Team 4)
Helpful to discuss difficult patients	Researching to go beyond regular therapies (Team 6)	Helps to discuss difficult patients (Team 6)	Solutions found for frustrating problems (Team 1)
Nonhierarchical			Cooperative effort Nonhierarchical (Teams 1 & 6)
No or few discussions or decisions have happened	Have not had good discussions, meeting cancelled, missed meetings (Team 4)		Discussion not as complex or challenging as hoped (Team 4)

*Second follow up meeting Team 4 missing, final meeting Team 2 missing

Table 3. Trust and Respect Themes – Changes Over Time

	First Follow Up Meetings	**Second Follow Up Meetings**	**Final Meetings**
Date of meetings	December 13 to January 18, 1999	February 8 to March 2, 2000	April 25 to June 7, 2000
Number of teams	6 teams	5 teams*	5 teams*
Themes Felt comfortable	Feel comfortable, help connect Get along well Relax Honest about things (Teams 2, 4 & 5)	Don't feel alone Similar views One of the better groups Comfortable (Teams 2, 5 & 6)	Comfortable Sharing Felt safe & comfortable Work well Relationships/friendships (Teams 1, 3, 5 & 6)
Learn from each other	Each looks for different things, all making different observations of patient Good learning experience (Teams 5 & 6)	Pick up tips (Team 5)	All learning from each other Observations to team (Teams 3 & 5)
Treat with respect	Totally valid team member, involved Respect others so not to overwhelm Treat with respect (Teams 1, 2 & 5)	Invaluable help, role important (Team 1)	Listen to opinions Involve all four members Wonderful asset (Teams 1, 3 & 5)
Trust team members (know what each can do)		Need help with some patients Great ideas on patients (Teams 1 & 5)	Know each other Rely on skills, open to ideas Each person brings something (Teams 1, 5 & 6)
Trust to follow through		Make sure is happening right Delegate as appropriate (Teams 1 & 3)	Reinforcing message, same message from team (Team 3)
Decreased respect			Did not see self as benefit to team Listened to each other after project intervened, No respect for others' time (Team 4)

*Second follow up meeting Team 4 missing, final meeting Team 2 missing

Table 4. Shared Goals Themes – Changes Over Time

	First Follow Up Meetings	**Second Follow Up Meetings**	**Final Meetings**
Date of meetings	December 13 to January 18, 1999	February 8 to March 2, 2000	April 25 to June 7, 2000
Number of teams	6 teams	5 teams*	5 teams*
Themes			
Goals written	Have goal sheet Need something concrete at end (Teams 2 & 5)		Discussing goal helped team know each other Give something to go back to (Teams 1, 5, 6)
Help patients	Goal to help patients (Team 3)	Work toward goals, motivated to help patients (Team 3)	
Goal is the focus (team sets goals)			All head in the direction Self generate vision, set own goals Goals all similar in team (Teams 1, 5 & 6)
Goals change over time	Move to new goals (Team 2)		Would refer back to goal given time (Team 5)
Goals not accomplished	Some instances goals working others not (Team 2)		Did not accomplish what wanted to (Team 4)
Do not need goal			Did not refer back to goal Do without formal goal Just what did (Teams 3 & 4)

*Second follow up meeting Team 4 missing, final meeting Team 2 missing

Table 5. Communication Themes – Changes Over Time

	First Follow Up Meetings	**Second Follow Up Meetings**	**Final Meetings**
Date of meetings	December 13 to January 18, 1999	February 8 to March 2, 2000	April 25 to June 7, 2000
Number of teams	6 teams	5 teams*	5 teams*
Themes			
Communication at meeting (face to face)	Face to face communication Have not needed instant communication Meeting main communication (Teams 1, 3, 6)	Most communication at meeting (Team 1)	Face to face communication makes big difference Communicate better Communicate with all team members (Teams 1 & 5)
Constant communication during week	Fax summary information to other team members More interim communication as project progresses Constant communication during week (Teams 1, 3, 4 & 5)	Nurse is communication link (Team 5)	Office nurse coordinates (Team 6)
Bring patient information to team	Meeting communicate patient follow up, patients seen in last week and to give background before seen (Teams 1 & 6)	Bring information to group Pass on information to others Meeting communicate follow up, & available resources (Teams 1, 3, 5 & 6)	Gather information for team (Team 5)
Decreased communication		Information not communicated (Team 3)	Stopped meeting, not productive, frustrating, did not call when not coming to meetings Meeting okay but need instant communication (Teams 3 & 4)

*Second follow up meeting Team 4 missing, final meeting Team 2 missing

Table 6. Contributions to Team Meetings

Team	Participant (team members in bold)	Number of Contributions and Value to Other Team Members					
		First Follow up Meeting		Second Follow up Meeting		Final Meeting	
Team 1	P1 = facilitator	50		8		21	
	P2 = home care nurse	**42**	+	**41**	+	**15**	+
	P3 = physician	**45**	+	**56**	+	**15**	+
	P4 = pharmacist	**51**	+	**41**	+	**9**	+
	P5 = project staff	*		68		*	
Team 2	P1 = facilitator	60		3		**	
	P2 = pharmacist	**44**	+	**12**	±	**	
	P3 = 1st h. care nurse	*		**10**	+	**	
	P4 = physician	**56**	+	**34**	+	**	
	P5 = 2nd h. care nurse	**37**	+	**5**	+	**	
	P6 = project staff	*		46		**	
Team 3	P1 = facilitator	52		24		*	
	P2 = physician	**41**	+	**63**	+	**16**	+
	P3 = office nurse	**31**	+	**54**	+	**26**	+
	P4 = home care nurse	**37**	+	**29**	+	**19**	+
	P5 = pharmacist	**38**	+	**36**	+	**21**	+
	P6 = project staff	*		114		29	
Team 4	P1 = facilitator	68		**		52	
	P2 = physician	**38**	±	**		*	
	P3 = home care nurse	**57**	±	**		**52**	+
	P4 = pharmacist	**29**	±	**		**46**	+
Team 5	P1 = facilitator	40		3		33	
	P2 = office nurse	**16**	+	**8**	+	**12**	+
	P3 = home care nurse	**18**	+	**30**	+	**10**	+
	P4 = physician	**40**	+	**41**	+	**45**	+
	P5 = pharmacist	**28**	+	**32**	+	**30**	+
	P6 = project staff	*		59		*	
Team 6	P1 = facilitator	68		40		28	
	P2 = pharmacist	**30**	+	**19**	+	**5**	+
	P3 = physician	**53**	+	**34**	+	**28**	+
	P4 = office nurse	**11**	+	**13**	+	**22**	+
	P5 = home care nurse	**31**	+	**23**	+	**20**	+
	P6 = project staff	*		34		*	

*Not present at meeting **No recorded meeting

Value of contributions: + Clear evidence of value placed on their contributions
± Limited evidence of value
– No evidence of contribution being valued

Table 7. Team Patient Care Processes[a]

Team	Number of Patient Histories Completed*	Number of Team Meetings	Number of Issues Identified per Patient	Number of Actions per Patient	Percentage of Issues Resolved**
Team 1	37/44	28	4.9	9.3	35.0%
Team 2	29/29	24	2.9	3.3	42.3%
Team 3	29/30	23	4.2	6.3	25.4%
Team 4	12/17	23	0.6	1.0	11.8%
Team 5	32/32	28	5.2	7.2	46.5%
Team 6	43/47	25	2.3	3.0	68.1%
Total	182/199	151	3.5	5.5	40.4%***

*Number of histories completed divided by number of patients enrolled in project

**Includes issues fully resolved, improved or controlled

***The status of 23.1% of issues was not specified

[a] These findings have been previously reported by Cote et al. (2002) and Farris et al. (2000)

Table 8. Team Process and Functioning*

Team	Team Process**	Team's Concerns with the Project
Team 1 - Learning	++	Use of Computer for documentation was problematic and resulted in manual note taking with data entry being backlogged.
Team 2 - Process	+	Number of patients in project not practical for adequate discussion and follow up.
Team 3 - Visionary	+	Difficult to recruit new patients and follow-up with current patients in the available time.
Team 4 - Unclear	–	Not enough time to recruitment the number of patients expected by project researchers.
Team 5 - Boundary	++	More useful to set up project teams in a clinic where episodic patient care occurs.
Team 6 - Enhance	++	Number of patients that were expected by project in a short time span was too great and have teams set in location where all providers work.

*Team Process: The best teams were able to discuss most of their patients, have team members attend most meetings and have a clear process for patient follow up.

**Team ratings based on qualitative analyses: Rating Scale ranges from "++" Exhibited most or all of the time and among most/all providers, "+" Exhibited some of the time, but among limited number of providers, to "–" Rarely or not exhibited.

Chapter 4 – Second Paper

Primary health care teams: Team members' perceptions of the collaborative process

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A version of this chapter has been submitted for publication to the Journal of Interprofessional Care.

Introduction

Collaboration and health care teams are common in hospitals and long-term care facilities, but they are often not available to providers in the community where most practitioners work independently. A team environment could provide support for community-based health care providers as well as allow for a more efficient sharing of information. The care provided by the team could encompass such things as collaboration over medication use, follow-up, medical therapy or the need for referrals to specialists, which are especially important when caring for complex patients.

While much has been written about collaboration, few studies have systematically examined the perceptions of health care workers collaborating in the community. The literature has identified the understanding of team members' roles, effective communication, common goals and respect for others as important elements for collaboration (Lorenz at al., 1999; Sheer, 1996; Sullivan, 1998). Some of the studies that have examined community teams have also identified these elements as being important components of teamwork. Long (1996) examined primary healthcare teams in England, specifically looking at their perceptions of teamwork. Using a qualitative approach, Long identified role recognition and communication as important for team members' positive perception of team function. Though not specifically looking at primary healthcare professionals, Coeling and Wilcox (1994) also found that nurses and physicians needed open communication in order to collaborate effectively. In a study of primary health care workers in a military setting, Byers et al. (1999) found that collaboration among physicians, nurse practitioners and physician assistants was a significant predictor of job satisfaction. Finding ways to share professional skills and work across role boundaries was a theme that emerged in a primary care study in England (Galvin et al., 1999). None of these studies, however, included pharmacists on their teams. The inclusion of pharmacists, along with nurses and physicians, on the teams may add a new dimension to the knowledge that has already been gathered. This paper will describe a project that brought together family physicians, pharmacists and home care nurses to work in a collaborative manner in the community setting and will explore their perceptions of the process.

Objectives

This study was part of a larger demonstration project whose purpose was to improve or maintain the health of high-risk individuals living in the community by using health care teams to enhance care and the quality of medication use (Farris et al., 2000). The purpose of this paper is to examine healthcare providers' perceptions of the collaborative process and compare levels of satisfaction among them before and after that process.

Methods

Participants

Six primary healthcare teams of community providers including pharmacists, Home Care nurses, office nurses and family physicians were formed. Team members were selected by a variety of processes. Physicians were recruited primarily through identification of interested individuals by the four family medicine network coordinators of the Capital Health Authority in Edmonton, Alberta, Canada. Study pharmacists and the Director of Operations for Home Care also referred other physicians. The potential participants were mailed a study information sheet containing a description of the project and the expectations of the research team. The Principal Investigator followed this information with a visit or telephone call to answer questions and determine the physician's willingness to participate.

Interested pharmacists were identified through use of a letter sent to nearly 700 area community pharmacists. The letter contained a description of the project and the expectations for team members. Twelve pharmacists responded to the letter. In addition, pharmacists were identified by project staff from previous work relationships. Interested pharmacists were asked to answer questions such as, what did you learn about the project from the information sheet, what caught your interest in the project, and what is your current interaction with Home Care nurses and family physicians?

Home Care nurses were identified by the Director of Operations of Community Care and Public Health in the Capital Health Region. These individuals received a study information sheet and were contacted by the Project Coordinator to determine their willingness to participate. Three office nurses were also included on the teams at the request of the teams' physicians.

Twenty-two providers were invited to participate in the project to form the six primary healthcare teams. A family physician, a community pharmacist, office nurse and a Home Care nurse formed three teams. Two teams included a physician, a pharmacist and a Home Care nurse. The final team included a physician, a pharmacist, and two Home Care nurses who shared their time on the team. Informed consent was obtained from all the participants.

From September 1999 to April 2000, six primary health care teams provided collaborative care to 199 high-risk individuals living in the community. The teams were encouraged to develop their own processes to run their meetings, ways to make decisions, methods of communication and to set their own goals. A group facilitator guided the groups through three initial group meetings and continued to meet with each group every two months.

Design

A simple pre and post-test design was used to evaluate the impact of team care on providers' attitudes. Self-administered questionnaires were used to explore team members' perceptions of the collaborative processes. Questionnaires were administered at the beginning of the study, twice during the study at approximately two-month intervals and at the end of the study. Participants were given the questionnaires during their team building meetings and had the option of completing the questionnaire during the session or sending it directly to the research office. Follow-up was done via facsimile and telephone to obtain a 100% response rate.

Questionnaires

Survey questions were taken from previously tested instruments in order to strengthen the validity and reliability of the study. Where scores were combined a test of reliability was performed to determine the measure's consistency (Myers & Well, 1995). All questions were reviewed by the research team to support the face validity of the questionnaire (Neuman & Kreuger, 2003). In addition, the quantitative results were triangulated with the qualitative findings.

The basic questionnaire contained five questions examining job satisfaction, nine questions examining role recognition and experience in the team, and twelve questions addressing satisfaction with the collaborative process, care decisions and quality of care.

The five job satisfaction questions came from Melville (1980). Melville used five items to measure job satisfaction in general practitioners and found the score to be a reliable measure of satisfaction. The nine questions about various aspects of team work, such as role recognition, the usefulness of team meetings and liaising about care were taken from Young (1994). To examine the process of team care and how collaboration occurred, the Collaboration and Satisfaction About Care Decisions (CSACD) instrument, originally developed to measure physician-nurse collaboration in a hospital setting, was used (Baggs, 1994). These seven questions were totaled to give a Collaboration total score. Two questions from Baggs regarding satisfaction with decision-making processes and satisfaction with decisions were also included. The instrument was found to be a valid and reliable measure (Baggs, 1994). Three additional questions, developed by the research team, were added to the surveys to measure the participants' perception of the improvement the team had on the quality of patient care. Each question was scored on a Likert-type scale from 1 (disagree strongly) to 7 (agree strongly). Questions were randomly worded negatively or positively to reduce response bias.

Each questionnaire for the four time periods contained the basic 26 questions. In addition, the first questionnaire asked participants about their current work experience and job satisfaction as well as their expectations of being in a team. Each provider was also asked basic demographic questions. Additional questions were also included on the final questionnaire to determine if the experience of collaborating with other health care providers met their expectations. Six open-ended questions were used to gather information on the extent to which the provider's experience in the team influenced their practice outside of the team, differences with this experience as compared to other team work, their preference for team work and their advice for others working in teams.

Data Analysis

The quantitative data were analysed using SPSS 10.0, and the level of statistical significance was set at $p<0.05$. Descriptive statistics were used to describe the providers. Demographic information collected included age, gender, educational level, additional training, years in practice, previous experience in a health care team and practice volume. Frequencies of each variable were reported and the mean age was calculated.

Before the analysis, the negatively worded questions were recoded so that a higher number was interpreted as more positive. According to the previously published studies, summated scores were computed for collaboration and job satisfaction (Baggs, 1994; Melville, 1980). The reliabilities of the collaboration and job satisfaction scores were tested at Time 1. Frequencies and descriptive statistics were performed for each variable. Repeated Measures ANOVA was used to detect changes in the scores from Time 1 to Time 4. Due to the small number of participants, the nonparametric Wilcoxon Signed Ranks test was used to determine if Time 1 scores were different than Time 4, as a comparison to the results obtained from the Repeated Measures ANOVA. Results were found to be similar between the two tests.

The teams were divided into two groups based on the qualitative analysis of team process meetings (reference to first thesis paper). One group consisted of the most successful and best functioning teams and the other group contained the remaining teams. The scores for the two groups were compared at Time 4 focusing on the decision making and collaboration questions. In addition, Time 4 scores were subtracted from Time 1 scores to give an indication of the change in scores over the study period. These change scores from the two groups were then compared. The nonparametric Mann-Whitney U test was used for the analysis.

To make visual comparison with other variables easier the summated collaboration and job satisfaction scores were converted to the seven-point Likert-type scale after analysis. In addition, the open-ended questions from the final survey were content analysed by exploring common themes among providers and amongst the different teams.

Results

Provider Characteristics

The 22 providers ranged in age from 23 to 52 years, with a mean age of 38.8 years (SD=8.7). All physicians were male and all the nurses were female. Pharmacists were essentially all female with the exception of one male. Years in practice ranged from newly graduated to 20 or more years of practice. Practice volume varied significantly among the professions, with all Home Care nurses seeing between zero and nine patients a day and a third of pharmacists seeing 80 or more patients a day. Thirteen providers reported that they had received additional training in specialized areas. Some of these areas included specialization in asthma, diabetes, geriatrics, HIV/AIDS, critical care and psychotherapy, with the most common, reported by four providers, being diabetes. All providers, except one, reported being part of a health care team in the past.

Provider Expectations and Experiences

Five items were found to be significantly different over the four time periods as shown in Table 1. Compared to their expectations at the beginning of the study, providers reported that working with others was more helpful than they expected ($p \leq 0.035$). At baseline, the perceived impact of team care to improve patients' health status averaged 5.7 (SD = 1.5). Over the period of the study, providers' perceptions of the teams' impact increased ($p \leq 0.025$). Providers felt they were increasingly able to access the patient information that they needed ($p \leq 0.001$). They felt part of a team to a greater extent then they expected at the start of the study ($p \leq 0.009$) and they perceived that other providers were not confused about their professional role ($p \leq 0.004$).

While expected job satisfaction in the team, as measured by the job satisfaction scale (Melville, 1980), did not increase significantly over time, satisfaction did increase as compared with providers' current job. The job satisfaction score ranged from 5 to 35 and was converted to a scale of 1=disagree strongly to 7=agree strongly. Providers ratings of their satisfaction with their job before and after they began in the team are shown in Table 2. Working in a team seemed to improve the job satisfaction ratings of the providers ($p=0.02$).

The examination of the six teams as two groups, based on their ability to function well as a group, is shown in Tables 3 and 4. A significant difference between the two groups was found in their satisfaction with the decision making process in the final questionnaire ($p=0.02$). When the change in scores from Time 1 to Time 4 was examined satisfaction with the decision making process was again significantly different amongst the groups ($p=0.03$). In addition, the change in their satisfaction with decisions was positive in the well functioning group compared to a negative change in the other group (p=0.02).

The additional questions included on the final questionnaire gathered information on the influence of collaborating on providers and their perceptions of their team's effectiveness. In response to the question "did the team meet your expectations for patient care?" nine providers reported that the team exceeded their expectations. Team care met expectations for an additional nine providers. Providers were asked if their teamwork had influenced their practice outside of the team. Fourteen providers reported that they were influenced a very great deal to a lot, with only one professional reporting that they were not influenced by the team.

At the end of the study providers were also asked if it was important to have a facilitator available to initiate team building. On a scale of 1 equaling very important and 5 equaling not at all important, providers' responses averaged 2.2 (SD = 1.2). This is similar to their answer to the question "do you think you would have been able to develop your team and team building skills without the assistance of a facilitator?" where 40.9% answered "yes" and 45.5% answered "unsure".

Provider Perceptions

Content analysis of the open-ended questions in the final questionnaire identified many common themes among the providers and teams. The general themes included the development of a better understanding of other team members, an increased comfort level when interacting with other professionals, and a preference to work in a team environment when providing care for high-risk individuals. The following section expands on these themes.

Providers were asked the extent to which working in the team influenced their way of practice outside of the team. Five of the teams responded by explaining that working in the team gave them a better appreciation of the other team members' perspectives and roles in health care.

> *I have an even greater understanding of my team's work load, time constraints and the broad scope their jobs involve. When we each work in an isolated cage it's hard to truly understand what's going on in another professional's 'cage'. (Pharmacist)*

Specifically the role of the pharmacist and Home Care nurse were mentioned as being better understood.

> *Working in the Collective was a very good experience for me especially to find out the pharmacist's role and how essential they are for patient care. (Home Care Nurse)*

Providers gained an increased comfort level when they communicated with different health professionals outside of the team.

> *There is improved comfort in dealing with MD's now, and I have more confidence and courage to call a doctor about a home care client concern. (Home Care Nurse)*

> *[I am] more eager to form relationships with other disciplines. (Physician)*

Communication was also enhanced within the team as providers began to know and trust their fellow team members.

> *I feel that we did communicate openly, especially as time went on and we became more comfortable with one another. We were then able to discuss each patient and tailor a plan for them —with each discipline contributing their opinions where required. (Pharmacist)*

An increase in knowledge was reported by five of the teams. Teams members learned more about the ways to improve compliance, communicate with patients, and the need for patient monitoring.

> *Communication skills have improved with patient and myself. (Office Nurse)*

Some pharmacists gained an appreciation for the amount of information patients understand during counseling. They were able to use this knowledge in all areas of their practice including their work outside of the team.

> *I have learned to appreciate what patients really understand and do on their own for their health care – in making health related/treatment recommendations. I am now coming from a more practical rather than idealistic standpoint. (Pharmacist)*

Providers were asked to describe the differences that they noticed between this team experience and previous team work. Many team members reported that this team experience was more collaborative than their previous experiences.

> *Much more collaborative/cooperative model than previous experience. Much more rewarding. (Physician)*

Providers indicated that respect for each other was important to the way their teams operated.

> *In this group, we made the effort to do team building before any decisions were made. Our making of a decision making community made it possible to come up with decisions using consensus. We seemed to trust each other and respect each other. (Physician)*

Not all comments about the team were as positive. Some Home Care nurses found that dealing with a different patient base was quite difficult.

> *I was not familiar with all the clients, in most other teams, I have seen the client and reviewed the file and have dealt with the client. I was only familiar with the clients that I was consulted to. (Home Care Nurse)*

There was at times, confusion over the role of Home Care on the team, leading one nurse to adapt the way she decided whether or not to visit patients and number of patients visited.

> *All teams have growing pains and our team was no different. The major obstacle I experienced was that the other members failed to understand Home Care's role. Many of the referrals I received and asked to go out to visit client were not appropriate. For example: to view the family dynamics between a husband and wife. As the project progressed I would wait until we met and discussed every client before deciding it was an essential visit. I guess I used my own professional judgement. (Home Care Nurse)*

Providers were asked if they would choose to provide care for high risk patients using the team approach or if they would prefer to work as they had previously. All of the providers indicated that they would prefer to provide care for high risk patients using the team approach. Having the expertise of other professionals to draw on was very useful to some of the providers.

> *I am better able to monitor, have more help in education and can leave things to others with more expertise/skill than I in certain areas. I can concentrate on my skills – diagnoses/treatments. (Physician)*

> *As a team we overcome boundaries to providing good care much more effectively than as individuals. It enables each team member to have access to resources they need to provide optimal care much quicker than if they were working as separate entities. (Pharmacist)*

Each team member was asked to provide suggestions for other groups who might want to start a community team to provide care for high risk patients. Some of the providers, eight of the nineteen who answered the question, suggested that setting aside time to learn to work as a team was very important. Time to get to know team members and to set goals should be provided before the team begins to work with patients.

> *Get to know each other first on an informal personal level and then set your own goals and your own objectives that is specific to your team and your patient mix. (Pharmacist)*

> *Get to know each other as 'people' not only as MDs, nurses and pharmacists. (Home Care Nurse)*

Two team members suggested the need for a team facilitator to direct and aid in the team building process.

> *Team implies a working together. All professionals need to learn how to work as a team, therefore weekend workshops or even mandatory seminars should be created, and yes, a facilitator would be essential. (Home Care Nurse)*

One team suggested that it was important to allow adequate time for close monitoring of each patient and not to stress the number of people seen by the team.

> *High risk patients are high needs patients. They need continuous care and monitoring and also benefit from different health specialties. It is important to allow adequate time. (Pharmacist)*

Discussion

The providers in this study found that working in a team environment was very useful when they dealt with complex primary-care patients. They identified open communication, respect for other team members, understanding of their roles and expertise and being open to learning as important for collaboration. Both the qualitative and quantitative results identified these themes as important to the providers.

The providers came to rely on their fellow team members for support. Before they could trust other providers, each person had to learn about that provider. The lack of understanding of professional roles has previously been viewed as a barrier to effective collaboration (Sheer, 1996). More precisely, providers need to know what knowledge, skills and abilities other providers can offer to the team. When the skills of other health care workers are understood, respect and reliance can follow (Lorenz et al., 1999; Sullivan, 1998). Face to face communication can facilitate this level of trust.

Communication was an important part of the team environment. Providers felt that they were able to access the patient information that they needed. This access enabled better patient care and communication among the team. Communication is one of the essential elements needed for collaborative practice (CMA & CNA, 1996: Jones, 1997). This communication process needs to be defined by the group so that each member has the same expectations. Coeling and Wilcox (1994) found that not all health professionals understood effective communication to mean the same thing. In the present study, the teams found that taking the time to be comfortable with each other enhanced communication.

Providers found that they were able to learn from their fellow team members. It was important that they remain open to ideas and suggestions from the other disciplines represented on the team. Many of the providers reported what they learned in the team influenced their regular work in the community and the way they provided care to their other patients.

Collaboration among health care providers can be improved if they have a common goal (Lorenz et al., 1999). In this study, teams were able to develop a common purpose and goals with the help of a facilitator. These goals helped the team members understand what the others wanted to accomplish and also provided a way for them to learn about their fellow team members. Jones (1997) also found that providing adequate time for teams to develop and articulate a common purpose was necessary for an effective team. Many of the providers indicated that they needed time to meet before starting with patients, but the need for a facilitator to aid in the process was not as clear. Some providers were very clear in their preference for a person to help them set goals, and others thought they could do it on their own or were unsure. Most of the providers did feel that spending time on team issues and becoming comfortable with others was a needed component of their collaborative work. Long (1996) has also found positive perceptions of team building in primary health care team members.

Because team building is a dynamic process, it needs to be reviewed frequently. The teams were given time to review their teams' functioning every few months. While some teams concentrated on patient care, others chose to review their functioning. If the study was of a longer duration, each team may have been able to explore their team processes more deeply.

All providers in this study, except one, had worked previously in a team environment. This could account for the high expectations of their job satisfaction in the team at the beginning of the project. When their satisfaction with their current job was compared with their final satisfaction in the team, the level of satisfaction had increased. They all indicated that they would prefer to work in a collaborative manner when working with complex patients. The access to different opinions and ideas made the teams better able to provide patient care when difficult issues arose. This coincides with other studies that have found that a collaborative work environment can positively affect job satisfaction (Abbott, Young, Haxton, & Van Dyke, 1994; Byers et al., 1999).

Limitations

The small number of providers limits the generalizability of this study. A larger sample size would allow examination for smaller changes in perceptions. An examination for differences between the various professions and groups with unique patient populations would also be possible. In the present study, the groups had just begun to develop their working routines and become comfortable with their teams when the project drew to a close. Following groups who had worked through the initial stages of team building and had been working with patients for a year or more could provide additional insight.

When reviewing the quantitative results of this study, it should be noted that 16 variables were examined individually. In the most conservative analysis, if these results were corrected for multiple tests to reduce the chance of a Type 1 error, the significance level of 0.05 would need to be divided by 16 ($p=0.003$) (Myers & Well, 1995). In this case, only the variable "do not need more patient information" ($p=0.001$) would continue to be significant, with "no confusion about my role" ($p=0.004$) approaching significance.

This study is also limited by the high expectations on the initial questionnaire. This ceiling effect leaves little room for improvement in scores and thereby limits the ability to show statistically significant differences over the study period. The addition of a control group would allow the results to reflect the effects of working in the team. Further, external events happening at the time of this study could not be separated from the effects of the team experience.

Conclusion

This project provided community-based primary health care providers with the opportunity to work together to solve problems related to medications and the treatment of medical conditions. Team members reported that their work together gave them a better understanding of the skills, roles, and expertise of other members. They came to rely on other team members and found team care to be more helpful than they had expected. While providers' expected job satisfaction did not increase over the study period, their job satisfaction was significantly improved over their current job. Providers noted that many of the positive experiences and knowledge of other professionals' expertise gained in the team were carried over to their practice away from the team. After the study, all providers indicated that they would prefer to continue working in a team environment when caring for their high-risk complex primary-care patients.

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Table 1. Perceptions of Working in a Primary Health Care Team

	Mean (Std. Deviation)[1,2,3]			
Collective Activities (n=22)	Time 1	Time 2	Time 3	Time 4
Liaise about care	6.5 (±0.6)	6.7 (±0.6)	6.6 (±0.7)	6.7 (±0.6)
Others not confused about my professional role[4]	5.3 (±1.5)	5.6 (±1.6)	5.9 (±1.4)	6.3 (±1.2)***
Team meeting useful	6.7 (±0.5)	6.5 (±0.9)	6.4 (±0.9)	6.8 (±0.5)
Do not need more patient information (n=21)[4]	2.6 (±1.2)	4.1 (±1.7)	4.2 (±1.5)	4.1 (±1.8)***
Feel part of a team	6.5 (±0.6)	6.5 (±0.8)	6.4 (±0.9)	6.8 (±0.4)***
Other professionals' notes are available (n=21)	5.7 (±1.1)	5.7 (±1.4)	5.3 (±1.5)	5.8 (±1.4)
Working with others is helpful	6.6 (±0.6)	6.5 (±0.7)	6.6 (±0.7)	6.9 (±0.4)*
Referrals are appropriate (n=16)	5.9 (±1.0)	5.6 (±1.3)	5.6 (±1.1)	6.1 (±1.2)
Do not see too many patients[4] (n=21)	3.8 (±1.6)	3.9 (±2.0)	3.1 (±1.9)	3.7 (±1.9)
Equity in decision making process[5] (n=21)	5.9 (±0.7)	5.8 (±0.6)	5.7 (±0.9)	5.9 (±0.9)
Satisfaction with decision making process[4]	6.2 (±0.5)	6.1 (±1.3)	6.3 (±1.2)	6.3 (±0.8)
Satisfaction with decisions	5.0 (±1.3)	5.5 (±1.2)	5.9 (±1.0)	5.6 (±1.5)
Perceived Impact				
Improves quality of patient care	6.7 (±0.6)	6.5 (±0.9)	6.4 (±0.9)	6.7 (±0.6)
Improves medication use[4]	5.9 (±1.4)	6.0 (±0.9)	5.9 (±1.4)	6.3 (±0.8)
Improves patients' health status	5.7 (±1.5)	6.1 (±1.0)	6.1 (±0.8)	6.5 (±0.7)**

[1] Tests across time used Repeated Measures ANOVA
[2] Scale 1=Disagree Strongly and 7=Agree Strongly
[3] Expectations measured at Time 1
[4] Original question negatively worded
[5] Originally based on combined score, Cronbach's alpha reliability = 0.89 at Time 1
*p=0.04 significant difference Time 1 to Time 4
**p=0.03 significant difference Time 1 to Time 4
***p<0.01 significant difference Time 1 to Time 4

Table 2. Job Satisfaction in a Primary Health Care Team

Job Satisfaction (n=22)	Mean (Std. Deviation)[1,2,3]
Current (n=21)[4]	4.8 (±1.1)
Expected	5.5 (±0.9)
Time 2	5.2 (±1.0)
Time 3	5.1 (±1.4)
Time 4	5.5 (±0.9)*

[1] Tests across time used Repeated Measures ANOVA
[2] Originally based on combined score
[3] Scale 1=Disagree Strongly 7=Agree Strongly
[4] Cronbach's alpha reliability = 0.74
*p=0.02 Significant difference current job satisfaction to Time 4

Table 3. Comparison of Primary Health Care Teams at Time 4

Team Activities	Mean (Std. Deviation)[1,2] Teams 1, 5 & 6 (n=11)	Teams 2, 3 & 4 (n=11)	All Teams (n=22)
Working with others is helpful	6.9 (0.3)	6.8 (0.4)	6.9 (0.4)
Equity in decision making process[3]	6.2 (0.7)	5.8 (1.1)	6.0 (0.9)
Satisfaction with decision making process[4*]	6.6 (0.5)	5.9 (0.8)	6.3 (0.8)
Satisfaction with decisions	5.9 (1.8)	5.2 (1.3)	5.6 (1.5)

[1] Comparison between teams used Mann-Whitney U Test

[2] Scale 1=Disagree Strongly and 7=Agree Strongly

[3] Originally based on combined score

[4] Original question negatively worded

[*] p=0.02 significant difference between the best functioning teams (1, 5 & 6) and the other teams

Table 4. Comparison of Change Scores in Primary Health Care Teams

Team Activities	Mean (Std. Deviation)[1,2] Teams 1, 5 & 6 (n=11)	Teams 2, 3 & 4 (n=11)	All Teams (n=22)
Working with others is helpful	0.5 (0.7)	0.2 (0.6)	0.3 (0.6)
Equity in decision making process[3]	0.3 (0.5)	-0.1 (1.4)	0.1 (1.1)
Satisfaction with decision making process[4*]	0.5 (0.5)	-0.5 (1.4)	0.0 (1.1)
Satisfaction with decisions[**]	1.5 (1.6)	-0.4 (1.7)	0.5 (1.9)

[1] Change scores (Time 4 – Time 1)

[2] Comparison between teams used Mann-Whitney U Test

[3] Originally based on combined score, n=10 for Teams 1, 5 & 6 and n=21 for All Teams

[4] Original question negatively worded

[*] p=0.03 significant difference between the best functioning teams (1, 5 & 6) and the other teams

[**] p=0.02 significant difference between the best functioning teams (1, 5 & 6) and the other teams

Chapter 5 – Discussion

Introduction

This study focused on the perceptions of health care providers collaborating in community based teams. The providers' experience of working in a team was examined for signs that a power sharing partnership had developed. Each of the four components of the power sharing partnership was explored: shared decision-making, respect and trust, shared goals, and communication.

Each team faced different challenges with a variety of practice situations. While some teams were very successful in their development of a collaborative partnership, other teams struggled. Each of the successful teams was able to develop their own methods for working together. These findings have implications for health promotion practice where many different people and professions are brought together to address problems. A team that is able to collaborate well may be more efficient and effective.

This chapter will summarize and discuss both the qualitative and quantitative findings presented in the two papers. The emphasis will be on the providers' experience of the power sharing partnership components: shared decision-making, respect and trust, shared goals, and communication. Next, the strengths and limitations of the study will be discussed in more detail than was possible in each of the papers. Implications for practice and future research will conclude the chapter.

Summary and Discussion of Results

Shared decision-making.

In the results obtained in the questionnaire, providers reported that collaboration occurred when care decisions were made. They indicated that decision-making responsibilities were shared amongst the providers. While no significant change was seen over time, the scores remained high throughout the project. They were satisfied with the process but slightly less satisfied with the actual decisions that were made. Based on the qualitative results, Teams 1, 5 and 6 had the most success in sharing the decision making amongst team members.

Shared decision making was important for the more complex patients that were cared for by the providers. The ability to used collective knowledge to solve problems was found to be important by Cook et al. (2001). The present study had similar findings, with providers reporting that they could provide optimal care more quickly than if they were working alone. Decisions would be a matter of consensus and solutions could be found for frustrating problems. Initially, Teams 1, 5 and 6 discussed plans for their decision making process, which seemed to aid in their success. In an acute care setting, Wake-Dyster (2001) found that a plan for decision making and a supportive environment was important for team success. Based on the present findings, it seems probable that an initial investment in time to plan the decision making process may be of benefit in a community based team as well.

Trust and respect.

The need for trust and respect for other team members was referred to in both the open ended survey questions and in the meeting transcripts. Working in a team environment provided the opportunity for providers to learn more about each other and the challenges that they faced. A growing understanding of other providers allowed trust and respect to develop.

The experience of trust and respect, as a necessary component of collaboration, has been identified in studies of clinical nurse specialists and physicians (Arlanian-Engoren, 1995) and intensive care unit nurses and physicians (Baggs & Schmitt, 1997). Although the professions involved were different than in these previous studies, a similar need for trust and respect was perceived by the physicians, pharmacists and home care nurses in this study. Teams discussed the importance of feeling comfortable with their team members, and the need for respect and trust at various points in the study.

Shared goals.

Development of shared mission statements and goals was important to most of the teams. A majority of providers felt that the discussion of goals provided the opportunity to learn the motivations of other team members. The ability to come to consensus on a shared team goal, at the project's beginning, reflected a team's ability to function as a group. The one group that was unclear in their initial statement continued to struggle throughout the project.

The importance of shared goals, as part of the collaborative process, was identified by Ray (1988). She proposed that each profession works toward the team goal in different ways but that the group must remain focused on the same outcome for successful collaboration. In primary health care studies, shared goals have also been linked with team viability and effectiveness (Pearson & Spenser, 1995; Poulton & West, 1994). Based on the performance of the struggling team, this study supports the findings that part of a team's success is linked to its ability to share goals and convey these goals to all the members on the team.

Communication.

Clear communication between professionals has been linked to effective teamwork in other explorations of health care teams (Baggs & Schmitt, 1997; Long, 1996; Pearson & Spenser, 1995). This study also showed the importance of communication among team members. In the questionnaires, providers reported that they were able to access the patient information that they needed to a greater extent than they expected. They found that other providers' patient notes were available to them. In the team meetings, providers also observed that communication was improved compared to their regular practice experiences. The importance of open communication was especially important for three of the teams. Most teams were able to involve all their members in discussions with valuable contributions from each person. Good communication was a combination of accessing information, contributing to meetings, having contributions valued and discussing problems as a team.

Job satisfaction.

The providers in this study indicated that they found working as a team highly satisfying. As measured by the questionnaires, the providers' level of satisfaction increased as compared with their current job. They consistently indicated by their comments on the questionnaire that they would prefer to work in a collaborative manner when working with complex patients. This finding coincides with other studies that have found that a collaborative work environment can positively affect job satisfaction (Baggs & Schmitt, 1997; Byers et al., 1999).

Interestingly, the team that struggled in the project also indicated they would prefer the team approach to patient care over their previous work style. However, the final meeting transcripts tend to show that this team may not have been all that satisfied; comments on the lack of productivity and decreased number of complex and challenging problems may have indicated dissatisfaction. Melville (1980) used these aspects, interest in work and a lack of wasted effort, as part of her indicators for job satisfaction. Thus this team, which did not show overt evidence of collaboration, was probably also less satisfied.

Triangulation of qualitative and quantitative results.

The different methodological approaches used in this thesis supported the validity of the findings. Based on the results of the content analysis of the process meetings, teams were divided into those that functioned well together and teams that did not function quite as well. The degree of functioning was based on evidence of power sharing partnerships amongst the providers. Using the information on team function the questionnaires were analysed to determine if differences could be found in perceptions between the two groups. Providers in the best functioning teams were more satisfied with their decision making process at the project's conclusion than members of the other teams. These providers were also more satisfied with the decisions and the decision making process than they had expected at the project's start. Providers in the other teams were, on average, less satisfied than they had expected. Triangulating both the qualitative and quantitative methods was useful in confirming and supporting the findings (Shih, 1998). The importance of a power sharing partnership was evident in their responses in the meetings and their perceptions as expressed in the questionnaires.

Power sharing partnership model.

The power sharing partnership as proposed by Sullivan (1998) was comprised of four components: shared decision-making, respect and trust, shared goals, and communication (Figure 3). Based on the findings described in this study a revised power sharing partnership model was developed (Figure 4).

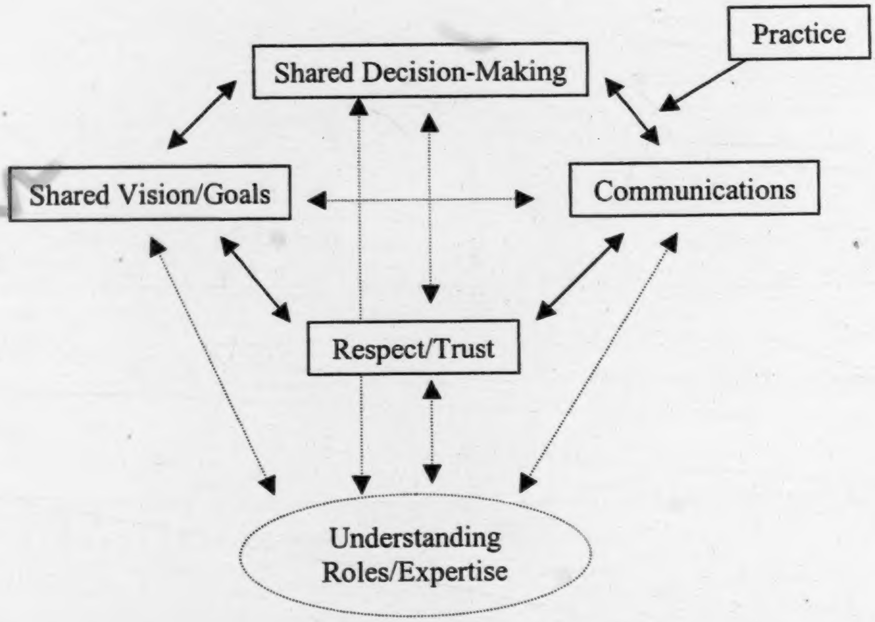

Figure 4. Revised Power Sharing Partnership Model (New component and connections illustrated by dotted lines)

Shared decision-making, respect and trust, shared goals, and communication continue to be important components in the new model. In addition to the connections in the previous model, interactions were seen between shared vision/goals and communications and between shared decision-making and respect/trust. The new connections in the revised model show the interactions between each component and how each component affected the others.

The understanding that new connections needed to be added to the model came from examining the perceptions of the providers. The connection between having shared goals and communication became evident in the discussions between the team members. In their meetings the providers described the usefulness of discussing shared goals as a way to help them communicate better in their working relationship. Their ability to communicate well also helped them to develop common goals. It was also evident that there was a connection between shared decision-making and respect and trust. In order to share in decision making the providers reported that they had to trust their team members and respect their input. They explained that if they did not feel comfortable with the others in the team they would have been reluctant to participate fully. As part of this connection between shared decision-making and respect was the realisation that when team members presented their ideas to the team the other members increasingly respected their opinions.

An interesting finding to come from this study was the importance of the understanding of the roles and expertise of the other team members. Providers perceived that learning about each other was a crucial element in making the teams work effectively. The new model reflects this importance by illustrating the understanding of roles and expertise as underpinning all the other components.

Evidence of the importance of role understanding was seen in various aspects of the study. In the questionnaires, providers reported that they felt that other team members increasingly understood their professional role as the study progressed. In the open-ended questions on the survey providers wrote about their increased appreciation for the scope of other professionals' jobs. A realisation that providers had gained an understanding of each team member was evident in the transcribed process meetings. The understanding of each professional's expertise was the base that enabled team members to work toward shared decision-making, respect and trust, shared goals, and communication.

Summary.

All four components of a power sharing collaborative partnership were important for the successful teams in this project. The awareness that shared decision-making, respect and trust, shared goals and good communication are needed to form and maintain an effective team will be useful to health promotion practitioners. In addition, the revised power sharing partnership model will add to the knowledge that has been gathered on effective primary health care team function by illustrating the connections between the various components and the importance of understanding other team members' expertise.

Strategies are beginning to be developed to refocus the health system on prevention (Mazankowski, 2001; Romanow, 2002). With these changes to the health system, community health care professionals will increasingly be brought together to collaborate in practice. Health promotion practitioners will have the opportunity to work in these groups, focusing on promotion and prevention. With knowledge of the components of a collaborative partnership, practitioners will be able to develop the skills needed to collaborate with many different people from a wide variety of disciplines.

Strengths and Limitations

This study was strengthened by the use of several methods of data collection. The information collected, when providers were with their team members, gave an indication of how providers interacted with each other. The qualitative data was collected during the team meetings, which gave a wealth of information on the providers' perceptions of their teams. In addition, data was collected with the use of individual surveys, which allowed the providers to respond without fear that other team members would learn of their comments. This use of both qualitative and quantitative methods allowed for additional depth in the information collected (Morse & Field, 1995). Both methods were used to collect information over time, which strengthened the results by providing a view of the changes that occurred as the project progressed.

The qualitative information on group processes was taken from the teams' interactions during the process meetings. The perceptions of each team member were used as a reflection of how the team members interacted during their patient care activities. Structured observations were not made of the teams while they worked on patient care. However, to get a sense of the dynamics of the teams, the researcher visited each team at least once during their team process meetings. These observations allowed for additional information that could not be gathered from audio tape recordings, such as meeting locations, body language and the dynamics of seating arrangements.

The number of providers was limited to 22 participants in 6 teams. This small number of providers limited the quantitative analysis. A larger sample size would have allowed for a more detailed examination of the changes in perceptions. An examination for differences between the various professions and teams with unique patient populations would also have been possible. The study was also limited by the high expectations on the initial questionnaire. This ceiling effect left little room for improvement in scores and thereby limited the ability to show statistically significant differences over the study period. The strength of the quantitative section was increased by the use of survey questions drawn from previously tested instruments, where possible. These questions were developed for use in health care settings yet were tested for reliability and validity with a different mix of health care providers or in non-primary care settings.

The providers in this study and the setting were described in order to provide information for the transference of these findings to another setting. By providing a rich description of the project readers are able to determine if these results could be applicable to their situation (Mayan, 2001). An important aspect of this project was the providers' motivation. Those who responded to the request for participants may have been more open to new ways of working and interested in new challenges. It was also possible that since these providers were only involved with their teams for part of their work week that their perceptions may differ from providers interacting on a full time basis.

Implications for Practice

Shared decision making, trust and respect, shared goals and good communication were all found to be important components of a successful team. Teams in collaborative practice should be given the opportunity to work toward developing these elements in their relationship with other team members.

One of the findings in this study was that the providers perceived that trust and respect for their fellow team members was extremely important. In practice it will be important that team members be allowed to develop trust in each other. Providers reported that it took time to develop this trust and that being able to learn about their fellow team members enhanced the process. Teams in practice should be given the time and opportunity to become comfortable with each other in order to develop trust and respect.

Setting a goal that all team members agreed upon was found to be important for the providers in this study. It is likely that all multidisciplinary teams would benefit from discussing the goals of their team before they begin caring for patients. The development of goals gives an opportunity for team members to learn about each other and begin to understand the differences in professional languages used by each provider. By discussing and agreeing on their goals team members can ensure that they are all working toward a common purpose.

The importance of good team communication was also demonstrated in this study. Providers found that the initial discussion of team processes prepared the team for better communication later in the project. Developing their own processes to ensure good communication would be essential for future teams. In addition, having a mechanism for the sharing of information among team members will enable each member to fully participate in team decisions and actions.

In practice, shared decision making will be an important component of a successful team. Findings of this study showed team members were more satisfied with their work when they were included in the decision making process. By incorporating shared communication, common goals and trust within the team processes future teams will be able to more successfully collaborate on decisions.

Another implication from this study for practicing teams is the need for a mechanism that can address problems in the team. It was difficult for teams that struggled with cohesiveness to change their patterns of behaviour on their own. It may be helpful to set a plan for teams before they begin on how they can deal with problems and who they can approach for help. Allowing the problem areas to be resolved on their own did not lead to success and providers were left disappointed and unproductive.

Implications for Future Research

In this study, due to funding limitations, the teams were only active for a total of eight months. The groups had just begun to develop their working routines and become comfortable with their teams when the project drew to a close. Future research on teams that had worked through the initial stages of team building and had been working together with patients for a year or more may provide additional insight into the collaborative process. In addition, an increased number of providers would allow for a more detailed analysis of the quantitative data and thus provide more information on individual professions and how they experienced their teams.

Future research could also explore the perceptions of teams in different settings. Some participants in this study expressed the need for an exploration of teams set in medical offices where episodic or emergency care occurred. They felt that physicians in these settings might not have the opportunity to collect as much information about patients or have the same relationship with their patients. Team care in these settings may provide a way to enhance the care of patients if team members could effectively work together. Other settings that could provide additional information on teamwork include a multi-profession office or a rural location. Some participants in the present study felt that a different team relationship might have developed if the providers were all physically located in one office. Future research could determine if different collaborative relationships would develop in these diverse locations.

Conclusion

The ability for community-based primary health care teams to collaborate effectively is becoming more important as health care priorities shift. By using both quantitative and qualitative methods this study showed the importance of shared decision-making, trust and respect, shared goals and communication in the functioning of a successful team. In addition, this study demonstrated that a foundation based on the understanding of the roles and expertise of team members was essential to power sharing partnerships. The most successful teams showed all these aspects of a collaborative partnership and were able to strengthen their teams over time. Reduced occurrence of any of these aspects led to a less positive and effective team.

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Appendix A – Provider Information Sheet

Title of Research Project: Primary Health Care Collectives: Improving the Quality of Medication Use in the Community

Principal Investigator: Karen Farris, B.S.Pharm., Ph.D.
Co-Investigators: Jeff Johnson, B.S.P., Ph.D.
David Feeny, Ph.D.
Ross Tsuyuki, Pharm.D., M.Sc.

Purpose
The purpose of this project is to improve or maintain the health of a group of high risk individuals living in the community by enhancing the quality of their medication use. Many health care professionals are involved in the processes surrounding medication use, but unfortunately they seldom work together to solve problems related to medications and the treatment of medical conditions. To change this, we are asking community providers to actively participate in the development of innovative and practical ways for them to collaborate so that together, with the patient, decisions involving care and medication needs can be improved.

Procedures. You will be required to

- Commit to an interdisciplinary approach to care.
- Participate in 6-8 hours of team building group discussions. These sessions will be audiotaped and transcribed, but no personal identifying information will be on the transcript.
- Routinely meet (once /week) to discuss patient care and team-work issues. The sessions where team-work is discussed will be audiotaped and transcribed, but no personal identifying information will be on the transcript.
- Provide assessment /consultation upon request of Collective member(s).
- Share appropriate patient care information with members of the Collective.
- Contact patients in your practice who meet the study inclusion criteria, discuss the study with them and contact the Research Office with interested individuals.
- Evaluate various tools to document patient information and care plans.
- Complete a survey taking about 5 minutes to indicate how your involvement in the Collective has affected your practice. You will complete this survey two-three times over the entire study period.
- Provide ways in which patient care and communication processes could be improved.

It is estimated that pharmacist will spend 12 hours per week; physicians 3 hours per week; home care case managers 4-8 hours per week on the patient care issues of which 1.5 hours will be allotted for interdisciplinary conferences.

Possible benefits. The possible benefit to you for being part of the study is that the quality of medication use and health status among your patients may be improved. It is likely that you will be able to make more informed decisions about your patients' care by sharing information among other primary healthcare providers.

Possible risks. There is little risk involved in the study. Decisions about healthcare delivered will be made by the team. In the case where a family doctor of one of the study participants is not part of this healthcare team, there is a possibility that the patient may not be able to be part of the study. The pharmacist who supplies the medications now may not be part of the team. If this occurs, we will keep them informed of medication changes.

Confidentiality. Personal records about this study will be kept confidential. You may refuse to answer any questions. Only the investigators and the team members will be able to see the information collected in this study. The information obtained during this study will be kept in locked cabinets and only the investigators will have access to it. We will maintain the study records for seven years. Any report published as a result of this study will not identify you by name. All information will be kept confidential except when professional code of ethics or legislation require reporting.

If any further analysis is conducted with the study, further ethics approval will be sought first.

We would like to thank you for your participation. You will be reimbursed for participation in the project. We estimate the time contribution as indicated previously. We will pay physicians $150 per hour and pharmacists and home care case managers $25-30 per hour for time spent in training and collaborative care. Travel expenses will also be paid.

If you have further concerns about any aspect of this study, you may contact the Patient Concerns Office of the Capital Health Authority, at 407-1040. This office has no affiliation with the study investigators.

Please contact one of the individual identified below if you have any questions or concerns.
Karen Farris, B.S.Pharm., Ph.D., Principal Investigator
Associate Professor
Faculty of Pharmacy and Pharmaceutical Sciences
University of Alberta.
(780) 492-2020

Sandra Brilliant, B.S.Pharm.
Project Coordinator
Faculty of Pharmacy and Pharmaceutical Sciences
University of Alberta.
(780) 492-1341

Appendix A - Provider Consent Form

Part 1 (to be completed by the Principal Investigator):

Title of Project: Primary Health Care Collectives: Improving the Quality of Medication Use in the Community

Principal Investigator(s):
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David Feeny, Ph.D. Faculty of Pharmacy & Pharmaceutical Sciences (780)492-2234

Part 2 (to be completed by the research participant):

Do you understand that you have been asked to be in a research study? Yes No

Have you read and received a copy of the attached Information Sheet? Yes No

Do you understand the benefits and risks involved in taking part in this research study? Yes No

Have you had an opportunity to ask questions and discuss this study? Yes No

Do you understand that you are free to refuse to participate or withdraw from the study at any time? You do not have to give a reason. Yes No

Has the issue of confidentiality been explained to you? Yes No

Do you understand who will have access to the data you provide? Yes No

This study was explained to me by: ______________________________

I agree to take part in this study.

Signature of Research Participant__________________Date______________

Printed Name ______________________________

Signature of Witness ___________________________

Printed Name ______________________________

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Signature of Investigator or Designee________________Date_____________

Appendix B – Questionnaire Administered at Time 1

Primary Health Care Collectives: Improving the Quality of Medication Use in the Community

Provider Satisfaction Questionnaire

This questionnaire asks about your perceptions of working in the collective and in the current health care system. There are 40 questions on 4 pages. They will take about 10-15 minutes to answer.

Please circle the answer that best describes your opinion. Some questions may not apply to you but it is important that we ask the same questions of everyone. Please excuse the apparent overlap and answer each question independently.

All information that you provide is strictly confidential. Your name is included on this questionnaire so that we can examine the differences across groups and professions. It will be removed from the questionnaire when we add your information to the database.

Thinking specifically of your current job environment and colleagues (not the collective) please answer the following 14 questions:

Current Experience	**Disagree strongly**	**Moderately disagree**	**Tend to disagree**	**Uncertain**	**Tend to agree**	**Moderately agree**	**Agree strongly**
1. Health care professionals liaise about care.	1	2	3	4	5	6	7
2. Other health care workers are confused about my professional role.	1	2	3	4	5	6	7
3. Multi-disciplinary team meetings are useful.	1	2	3	4	5	6	7
4. I need more information about my patients/clients.	1	2	3	4	5	6	7
5. I feel part of a team.	1	2	3	4	5	6	7
6. Other professionals' notes are easily available.	1	2	3	4	5	6	7
7. Working with other professions is helpful.	1	2	3	4	5	6	7
8. Referrals I receive are appropriate.	1	2	3	4	5	6	7
9. I have to see too many patients/clients in my work time.	1	2	3	4	5	6	7

Current Job Satisfaction

	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly
10. I feel some parts of my work don't make sense.	1	2	3	4	5	6	7
11. My work still interests me as much as it ever did.	1	2	3	4	5	6	7
12. Assuming pay and conditions were similar I would just as soon work in another profession.	1	2	3	4	5	6	7
13. I find real enjoyment in my work.	1	2	3	4	5	6	7
14. My work involves a great deal of wasted effort on my part.	1	2	3	4	5	6	7

Thinking of what you expect to happen in the collective please answer the following questions from 15 to 40:

Experience in the Collective

	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly
15. Members of the collective will liaise about care.	1	2	3	4	5	6	7
16. Members of the collective will be confused about my professional role.	1	2	3	4	5	6	7
17. Multi-disciplinary team meetings will be useful.	1	2	3	4	5	6	7
18. I will need more information about my patients/clients.	1	2	3	4	5	6	7
19. I will feel part of a team.	1	2	3	4	5	6	7
20. Other professionals' notes will be easily available.	1	2	3	4	5	6	7
21. Working with other professions will be helpful.	1	2	3	4	5	6	7
22. Referrals I receive will be appropriate.	1	2	3	4	5	6	7
23. I will have to see too many patients/clients in my work time.	1	2	3	4	5	6	7

Expected Job Satisfaction	**Disagree strongly**	**Moderately disagree**	**Tend to disagree**	**Uncertain**	**Tend to agree**	**Moderately agree**	**Agree strongly**
24. I will feel that some parts of my work don't make sense.	1	2	3	4	5	6	7
25. My work will still interest me as much as it ever did.	1	2	3	4	5	6	7
26. Assuming pay and conditions are similar I would just as soon work in another profession.	1	2	3	4	5	6	7
27. I will find real enjoyment in my work.	1	2	3	4	5	6	7
28. My work will involve a great deal of wasted effort on my part.	1	2	3	4	5	6	7

Collaboration	**Not at all**	**A very little**	**A little**	**A modest amount**	**A lot**	**A great deal**	**A very great deal**
29. How often will *collaboration* occur between the home care case manager, pharmacist and physician in making patient/client decisions? (include face to face, fax and phone contact)	1	2	3	4	5	6	7
30. How *dissatisfied* do you think you will be with the way patient/client decisions are made: that is with the *decision making process*, not necessarily the decisions themselves?	1	2	3	4	5	6	7
31. How *satisfied* do you think you will be with the patient/client care decisions?	1	2	3	4	5	6	7

Care Decisions

	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly
32. The home care case manager, pharmacist, and physician will not *plan together* to make the decision about patient/client care.	1	2	3	4	5	6	7
33. *Open communication* between the home care case manager, pharmacist and physician will take place as decisions are made about patient/client care.	1	2	3	4	5	6	7
34. *Decision-making responsibilities* for patients will be shared between the home care case manager, pharmacist and physician.	1	2	3	4	5	6	7
35. The home care case manager, pharmacist and physician will not *co-operate* in making the decisions.	1	2	3	4	5	6	7
36. In making decisions, *nursing, pharmacy* and *medical concerns* about patient/client needs will not be considered.	1	2	3	4	5	6	7
37. Decision making for patients/clients will be *coordinated* between the home care case manager, pharmacist and physician.	1	2	3	4	5	6	7

Quality of Care

	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly
38. As part of the collective, I think collaboration will improve the quality of patient/client care.	1	2	3	4	5	6	7
39. I think collaboration will not improve medication use in my patients/clients.	1	2	3	4	5	6	7
40. I think collaboration will not improve the health status of my patients/clients.	1	2	3	4	5	6	7

Thank you for completing this questionnaire. We appreciate the time that you took to answer all of the questions.

Appendix B – Questionnaire Administered at Time 2

Primary Health Care Collectives: Improving the Quality of Medication Use in the Community

Provider Satisfaction Questionnaire

This questionnaire asks about your perceptions of working in the collective. You will complete a questionnaire every 2 months. There are 33 questions on 4 pages. They will take about 10-15 minutes to answer.

Please circle the answer that best describes your opinion. Some questions may not apply to you but it is important that we ask the same questions of everyone. Please excuse the apparent overlap and answer each question independently.

All information that you provide is strictly confidential. Your name is included on this questionnaire so that we can examine the differences across groups and professions. It will be removed from the questionnaire when we add your information to the database.

Thinking of your experience in the collective, from when you completed the FIRST questionnaire to the present, please answer the following questions:

Experience in the Collective	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly	Not Applicable
1. Members of the collective liaise about care.	1	2	3	4	5	6	7	N/A
2. Members of the collective are confused about my professional role.	1	2	3	4	5	6	7	N/A
3. Multi-disciplinary team meetings are useful.	1	2	3	4	5	6	7	N/A
4. I need more information about my patients/clients.	1	2	3	4	5	6	7	N/A
5. I feel part of a team.	1	2	3	4	5	6	7	N/A
6. Other professionals' notes are easily available.	1	2	3	4	5	6	7	N/A
7. Working with other professions is helpful.	1	2	3	4	5	6	7	N/A
8. Referrals I receive are appropriate.	1	2	3	4	5	6	7	N/A
9. I have to see too many patients/clients in my work time.	1	2	3	4	5	6	7	N/A

Job Satisfaction

	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly	Not Applicable
10. I feel that some parts of my work don't make sense.	1	2	3	4	5	6	7	N/A
11. My work still interests me as much as it ever did.	1	2	3	4	5	6	7	N/A
12. Assuming pay and conditions are similar I would just as soon work in another profession.	1	2	3	4	5	6	7	N/A
13. I find real enjoyment in my work.	1	2	3	4	5	6	7	N/A
14. My work involves a great deal of wasted effort on my part.	1	2	3	4	5	6	7	N/A

Collaboration

	Not at all	A very little	A little	A modest amount	A lot	A great deal	A very great deal	Not Applicable
15. How often does *collaboration* occur between the home care case manager, pharmacist and physician in making patient/client decisions? (include face to face, fax and phone contact)	1	2	3	4	5	6	7	N/A
16. How *dissatisfied* are you with the way patient/client decisions are made: that is with the *decision making process*, not necessarily the decisions themselves?	1	2	3	4	5	6	7	N/A
17. How *satisfied* are you with the patient/client care decisions?	1	2	3	4	5	6	7	N/A

Care Decisions	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly	Not Applicable
18. The home care case manager, pharmacist, and physician do not *plan together* to make the decisions about patient/client care.	1	2	3	4	5	6	7	N/A
19. *Open communication* between the home care case manager, pharmacist and physician takes place as decisions are made about patient/client care.	1	2	3	4	5	6	7	N/A
20. *Decision-making responsibilities* for patients are shared between the home care case manager, pharmacist and physician.	1	2	3	4	5	6	7	N/A
21. The home care case manager, pharmacist and physician do not *co-operate* in making the decisions.	1	2	3	4	5	6	7	N/A
22. In making decisions, *nursing, pharmacy* and *medical concerns* about patient/client needs are not considered.	1	2	3	4	5	6	7	N/A
23. Decision making for patients/clients is *coordinated* between the home care case manager, pharmacist and physician.	1	2	3	4	5	6	7	N/A

Quality of Care	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly	Not Applicable
24. As part of the collective, I think collaboration improves the quality of patient/client care.	1	2	3	4	5	6	7	N/A
25. I think collaboration does not improve medication use in my patients/clients.	1	2	3	4	5	6	7	N/A
26. I think collaboration improves the health status of my patients/clients.	1	2	3	4	5	6	7	N/A

Provider Demographic Questions

The next set of questions asks about you and your practice environment.
Please check the answer that best applies to you.

27. What is your year of birth? ___________________

28. What is your sex? ______ Male ______ Female

29. What is the highest level of education that you have attained?

_____ Diploma or certificate from community college or nursing school
_____ Bachelor's or undergraduate degree (e.g. B.Sc. Pharm., B.Sc.Nursing)
_____ Master's (e.g. M.Sc.)
_____ Degree in medicine (M.D.)
_____ Earned doctorate (e.g. Ph.D., D.Sc.)
_____ Other (Please Specify ____________________)

30. Have you received training in order to specialize in a particular practice area? (e.g. pediatrics, geriatrics, asthma, diabetes)

_____ No
_____ Yes (Please Specify ____________________)

31. How many years have you been in practice?
_____ 0 – 2 years
_____ 3 – 4 years
_____ 5 – 9 years
_____ 10 – 14 years
_____ 15 – 19 years
_____ 20 or more years

32. Have you ever worked as part of a health care team before?
_____ No
_____ Yes If yes, was it in the _____ community
or in a _____ hospital?

33. How many patients do you see in a normal day?
_____ 0 – 9
_____ 10 – 19
_____ 20 – 29
_____ 30 – 39
_____ 40 – 49
_____ 50 – 59
_____ 60 – 69
_____ 70 – 79
_____ 80 or more

Thank you for completing this questionnaire. We appreciate the time that you took to answer all of the questions.

Appendix B – Questionnaire Administered at Time 3

Primary Health Care Collectives: Improving the Quality of Medication Use in the Community

Third Provider Satisfaction Questionnaire

This questionnaire asks about your perceptions of working in the collective. You will complete a questionnaire every 2 months. There are 27 questions on 4 pages. They will take about 10-15 minutes to answer.

Please circle the answer that best describes your opinion. Some questions may not apply to you but it is important that we ask the same questions of everyone. Please excuse the apparent overlap and answer each question independently.

All information that you provide is strictly confidential. Your name is included on this questionnaire so that we can examine the differences across groups and professions. It will be removed from the questionnaire when we add your information to the database.

Thinking of your experience in the collective, from when you completed the SECOND questionnaire to the present, please answer the following questions:

Experience in the Collective	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly	Not Applicable
1. Members of the collective liaise about care.	1	2	3	4	5	6	7	N/A
2. Members of the collective are confused about my professional role.	1	2	3	4	5	6	7	N/A
3. Multi-disciplinary team meetings are useful.	1	2	3	4	5	6	7	N/A
4. I need more information about my patients/clients.	1	2	3	4	5	6	7	N/A
5. I feel part of a team.	1	2	3	4	5	6	7	N/A
6. Other professionals' notes are easily available.	1	2	3	4	5	6	7	N/A
7. Working with other professions is helpful.	1	2	3	4	5	6	7	N/A
8. Referrals I receive are appropriate.	1	2	3	4	5	6	7	N/A
9. I have to see too many patients/clients in my work time.	1	2	3	4	5	6	7	N/A

Job Satisfaction	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly	Not Applicable
10. I feel that some parts of my work don't make sense.	1	2	3	4	5	6	7	N/A
11. My work still interests me as much as it ever did.	1	2	3	4	5	6	7	N/A
12. Assuming pay and conditions are similar I would just as soon work in another profession.	1	2	3	4	5	6	7	N/A
13. I find real enjoyment in my work.	1	2	3	4	5	6	7	N/A
14. My work involves a great deal of wasted effort on my part.	1	2	3	4	5	6	7	N/A

Collaboration	Not at all	A very little	A little	A modest amount	A lot	A great deal	A very great deal	Not Applicable
15. How often does *collaboration* occur between the home care case manager, pharmacist and physician in making patient/client decisions? (include face to face, fax and phone contact)	1	2	3	4	5	6	7	N/A
16. How *dissatisfied* are you with the way patient/client decisions are made: that is with the *decision making process*, not necessarily the decisions themselves?	1	2	3	4	5	6	7	N/A
17. How *satisfied* are you with the patient/client care decisions?	1	2	3	4	5	6	7	N/A

Care Decisions

Care Decisions	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly	Not Applicable
18. The home care case manager, pharmacist, and physician do not *plan together* to make the decisions about patient/client care.	1	2	3	4	5	6	7	N/A
19. *Open communication* between the home care case manager, pharmacist and physician takes place as decisions are made about patient/client care.	1	2	3	4	5	6	7	N/A
20. *Decision-making responsibilities* for patients are shared between the home care case manager, pharmacist and physician.	1	2	3	4	5	6	7	N/A
21. The home care case manager, pharmacist and physician do not *co-operate* in making the decisions.	1	2	3	4	5	6	7	N/A
22. In making decisions, *nursing, pharmacy* and *medical concerns* about patient/client needs are not considered.	1	2	3	4	5	6	7	N/A
23. Decision making for patients/clients is *coordinated* between the home care case manager, pharmacist and physician.	1	2	3	4	5	6	7	N/A

Quality of Care

Quality of Care	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly	Not Applicable
24. As part of the collective, I think collaboration improves the quality of patient/client care.	1	2	3	4	5	6	7	N/A
25. I think collaboration does not improve medication use in my patients/clients.	1	2	3	4	5	6	7	N/A
26. I think collaboration improves the health status of my patients/clients.	1	2	3	4	5	6	7	N/A

Previous Team Experience

Please complete question 27 if you have worked as part of a health care team before.

27. On the last questionnaire many of you indicated that you have previously worked as part of a health care team. Please indicate where you worked as part of a team and if it was as a student:

Please check all that apply.

		Student	Professional
________	During patient rounds in the hospital	☐	☐
________	As part of continuing professional education	☐	☐
________	As part of a multidisciplinary course	☐	☐
________	In a multidisciplinary outpatient clinic	☐	☐
________	In the military	☐	☐
________	In patient/client care conferences in continuing care	☐	☐
________	Other (specify ______________________________)	☐	☐

In 3 or 4 sentences please feel free to describe your experiences and include if it was during your student training or after you received your degree.

Thank you for completing this questionnaire. We appreciate the time that you took to answer all of the questions.

Appendix B – Questionnaire Administered at Time 4

Primary Health Care Collectives: Improving the Quality of Medication Use in the Community

Final Provider Satisfaction Questionnaire

This questionnaire asks about your perceptions of working in the collective. This is the last questionnaire that you will complete. There are 40 questions on 7 pages. They will take about 15-20 minutes to answer.

Please circle the answer that best describes your opinion. Some questions may not apply to you but it is important that we ask the same questions of everyone. Please excuse the apparent overlap and answer each question independently.

All information that you provide is strictly confidential. Your name is included on this questionnaire so that we can examine the differences across groups and professions. It will be removed from the questionnaire when we add your information to the database.

Thinking of your experience in the collective, from when you completed the THIRD questionnaire to the present, please answer the following questions:

Experience in the Collective	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly	Not Applicable
1. Members of the collective liaise about care.	1	2	3	4	5	6	7	N/A
2. Members of the collective are confused about my professional role.	1	2	3	4	5	6	7	N/A
3. Multi-disciplinary team meetings are useful.	1	2	3	4	5	6	7	N/A
4. I need more information about my patients/clients.	1	2	3	4	5	6	7	N/A
5. I feel part of a team.	1	2	3	4	5	6	7	N/A
6. Other professionals' notes are easily available.	1	2	3	4	5	6	7	N/A
7. Working with other professions is helpful.	1	2	3	4	5	6	7	N/A
8. Referrals I receive are appropriate.	1	2	3	4	5	6	7	N/A
9. I have to see too many patients/clients in my work time.	1	2	3	4	5	6	7	N/A

Job Satisfaction

	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly	Not Applicable
10. I feel that some parts of my work don't make sense.	1	2	3	4	5	6	7	N/A
11. My work still interests me as much as it ever did.	1	2	3	4	5	6	7	N/A
12. Assuming pay and conditions are similar I would just as soon work in another profession.	1	2	3	4	5	6	7	N/A
13. I find real enjoyment in my work.	1	2	3	4	5	6	7	N/A
14. My work involves a great deal of wasted effort on my part.	1	2	3	4	5	6	7	N/A

Collaboration

	Not at all	A very little	A little	A modest amount	A lot	A great deal	A very great deal	Not Applicable
15. How often does *collaboration* occur between the home care case manager, pharmacist and physician in making patient/client decisions? (include face to face, fax and phone contact)	1	2	3	4	5	6	7	N/A
16. How *dissatisfied* are you with the way patient/client decisions are made: that is with the *decision making process*, not necessarily the decisions themselves?	1	2	3	4	5	6	7	N/A
17. How *satisfied* are you with the patient/client care decisions?	1	2	3	4	5	6	7	N/A

Care Decisions

	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly	Not Applicable
18. The home care case manager, pharmacist, and physician do not *plan together* to make the decisions about patient/client care.	1	2	3	4	5	6	7	N/A
19. *Open communication* between the home care case manager, pharmacist and physician takes place as decisions are made about patient/client care.	1	2	3	4	5	6	7	N/A
20. ***Decision-making responsibilities*** for patients are shared between the home care case manager, pharmacist and physician.	1	2	3	4	5	6	7	N/A
21. The home care case manager, pharmacist and physician do not *co-operate* in making the decisions.	1	2	3	4	5	6	7	N/A
22. In making decisions, *nursing, pharmacy* and *medical concerns* about patient/client needs are not considered.	1	2	3	4	5	6	7	N/A
23. Decision making for patients/clients is *coordinated* between the home care case manager, pharmacist and physician.	1	2	3	4	5	6	7	N/A

Quality of Care

	Disagree strongly	Moderately disagree	Tend to disagree	Uncertain	Tend to agree	Moderately agree	Agree strongly	Not Applicable
24. As part of the collective, I think collaboration improves the quality of patient/client care.	1	2	3	4	5	6	7	N/A
25. I think collaboration does not improve medication use in my patients/clients.	1	2	3	4	5	6	7	N/A
26. I think collaboration improves the health status of my patients/clients.	1	2	3	4	5	6	7	N/A

Team Experience

27. Did the team meet your expectations for patient/client care?

    a. It exceeded my expectations.
    b. It met my expectations.
    c. It sometimes met my expectations.
    d. It occasionally met my expectations.
    e. It rarely met my expectations.
    f. It never met my expectations.
    g. I'm not sure

28. Compared to how health care was followed-up/monitored for research patients/clients before the study, do you think the team followed-up/monitored their health care?

    a. A great deal more
    b. A lot more
    c. A moderate amount more
    d. A little more
    e. The same
    f. A little less
    g. A moderate amount less
    h. A lot less
    i. A great deal less

29. To what extent do you feel the team followed-up/monitored patient/client care throughout the study
    (from the time the patient/client met with the pharmacist until now)?

    a. A very great deal
    b. A great deal
    c. A lot
    d. A modest amount
    e. A little
    f. A very little
    g. Not at all
    h. I don't know

30. Do you feel that your team responded to the health concerns of the research patients/clients in a timely matter?
    a. All of the time
    b. Most of the time
    c. Some of the time
    d. A little of the time
    e. None of the time
    f. I don't know

31. To what extent has working in the Collective influenced the way you practice outside of the Collective?

a. A very great deal
b. A great deal
c. A lot
d. A modest amount
e. A little
f. A very little
g. Not at all

Describe how it has influenced you.

____

____

____

____

32. What differences/similarities have you noticed while working with this team (Collective) as compared to your previous work in a team?

33. If you had a choice of providing care for patients/clients at high risk using a team approach
(working in a Collective) or working as you had previously, which would you choose and why?

34. Do you think you would have been able to develop your team and team building skills without the assistance of a facilitator?

   a. Yes
   b. No
   c. I'm not sure

35. How important was it to have a facilitator initiate team building and promote teamwork?

   a. Very important
   b. Important
   c. Somewhat important
   d. Not very important
   e. Not important at all

36. The following is your Collective's Mission Statement:

   "To develop the skills and understanding required to effectively work as a team to achieve patient-focused and professional outcomes."

   To what extent does your Mission Statement reflect your experience in the Collective? Please comment.

37. What advice do you have for someone starting team care for high-risk patients/clients?

38. What advice do you have for people conducting research with someone like you?

Thank you for completing this questionnaire. We appreciate the time that you took to answer all of the questions.

Appendix C - Team Discussion Questions

The team facilitator used the following questions as a basis for discussion during the follow up and final team meetings (Bayne, 2000).

- How is the process working for this team?
- What is working?
- What is not working? What are some of the strategies to change?
- Reflect on the mission statement. Is it working?
- How are the meetings working? Are you being efficient? How do you make decisions?
- What have you accomplished? What's the one thing you are most proud of? What is one area that needs to be improved?